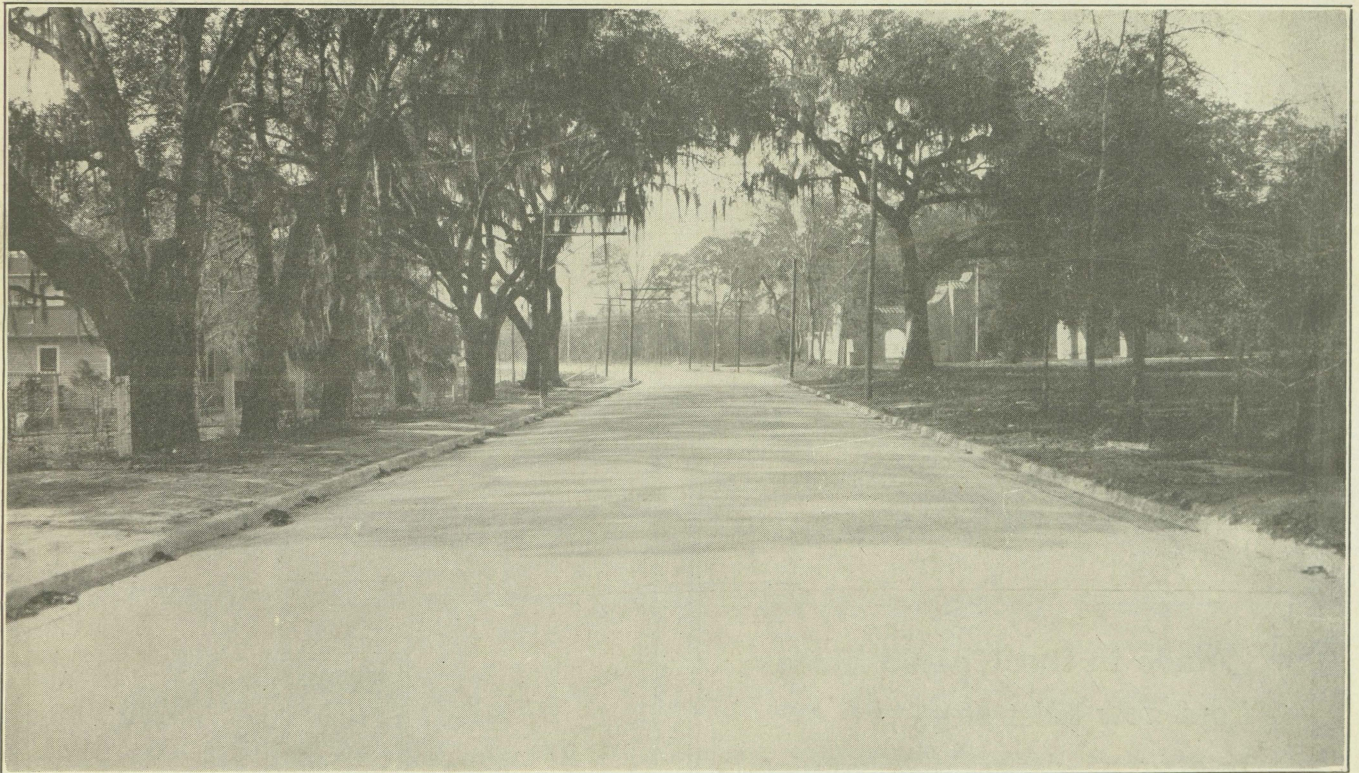


FLORIDA HIGHWAYS

Published by the State Road Department

Vol. VI

No. 5



Project 56, Road 10, Entering Tallahassee

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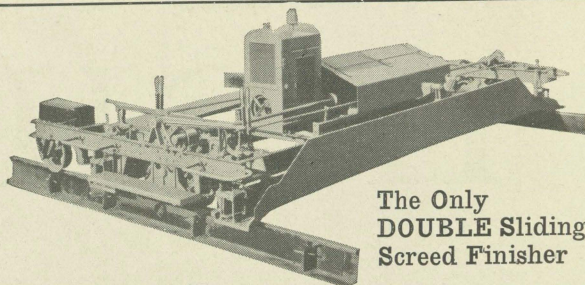
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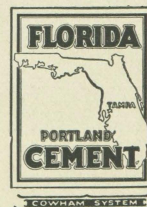
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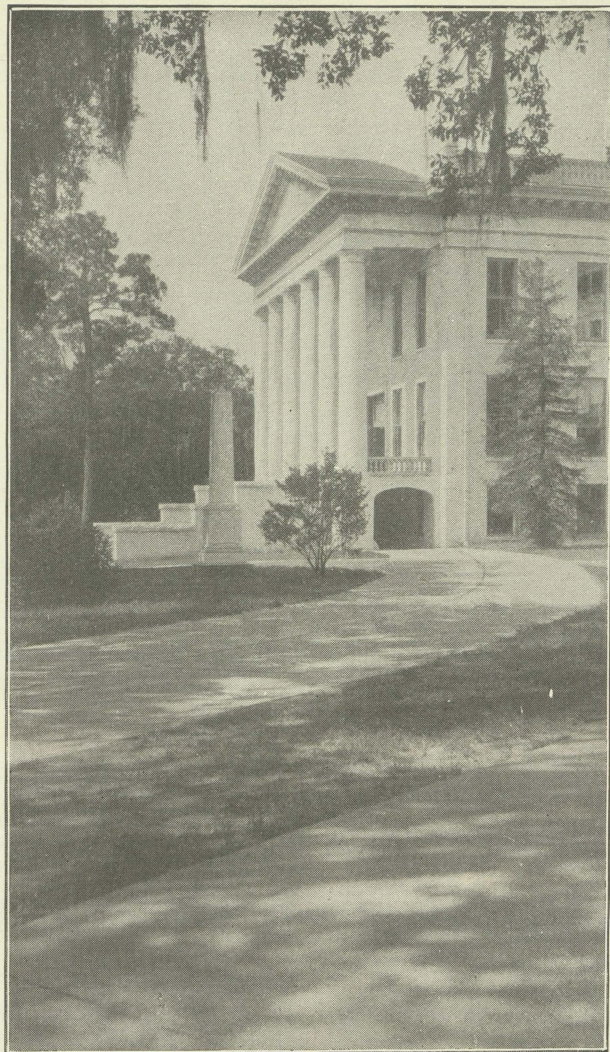
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FLORIDA

Vol. VI
No. 5



HIGHWAYS

MAY
1929

The State of Florida and Its Highways

By **FRANK F. ROGERS**, in "Michigan Roads and Pavements"

While Florida boasts in the possession of the oldest town in the United States, St. Augustine, founded in 1565, geologists tell us that in reality Florida is the youngest of the States.

It has no mountain section and may be described as an outgrowth and extension of the southern coastal plain. It is entirely underlain with limestone, mostly of the upper Eocene age. In fact one writer describes it as an immense mountain top, or table rock of limestone, mostly submerged, but covered with a network of pit holes varying from a few square feet to thousands of acres in area which form the beds for countless fresh water lakes mainly fed by springs of subterranean streams.

The comparative youth of the state is substantiated by the upper layers of fossil rocks showing practically the same formation now going on at the Florida Keys. In fact the state has not ceased to grow.

The surface of the state, especially in the central and northwest portions, is gently rolling and composed of sand, clay, marl, limestone, shells, etc. The center of the peninsula is a rather low ridge which forms the watershed between the Atlantic Ocean and the Gulf of Mexico. No part of the State is over 300 feet above sea-level.

From Lake Okeechobee on the south to within 40 miles of the north boundary are numerous lakes in

the beds already referred to—estimated at some 30,000. Most of these lakes are small but situated as they are in the orange belt, they add greatly to the charm of this part of the state, which otherwise would be quite devoid of scenery.

Abundance of sunshine and the mild climate which this State affords, will ever make it popular with those desirous of escaping the rigors of our northern winters.

Since the peninsula is more than 400 miles in length from north to south it presents a most pleasing variety of climate, ranging from the mild but invigorating temperatures found at St. Augustine, having the tang of a Michigan October, to the really tropical climate of Miami and Key West, more nearly resembling our weather in July and August. But there are no hot nights, for the ocean breezes make them forever impossible.

No description of Florida would be complete without some mention of the Everglades, some 5,000 square miles in area, and located to the east and south of Lake Okeechobee.

It was here that the great hurricane of September, 1928, caused the loss of more than 2,000 lives. The land immediately adjacent to and for 15 miles or more to the east and south of the lake is a low lying mucky marsh, not over three or four feet above the level of the lake, but now quite well drained by numerous canals, five of which have outlets in the ocean.

Lake Okeechobee is oval in shape, about 40 miles north and south and 30 miles from east to west and is over 1,200 square miles in area. It lies some 27 feet above sea level and is very shallow—scarcely more than 15 feet in depth.

The hurricane of 1928 blew violently, first from the northeast, thence from the southwest, passing through the north, and literally rolled the waters out of the lake and onto the marsh to a depth of eleven feet as estimated by eye witnesses interviewed by the writer. It is needless to say that all of the frail small houses occupied by laborers were swept away and most of the occupants drowned. At the time of my visit many small automobiles were strewn over the marsh whence they had been driven by the waves.

The most property damage and loss of life was at Belle Glade, near the southeast side of the lake and about 40 miles west of Palm Beach.

State Products

The products of the state are not so varied nor so profitable as in many of the northern states.

Once the state was well covered with long-leaf pine and lumber is still a most valuable product. In fact of all the state's industries, lumber, though necessarily growing less, still leads and amounts to more than one-third in value of the state's products. Tobacco ranks second at over 15 percent, while food products—citrus fruits and winter vegetables rank third at 12½ percent of the total. Paper products rank fourth, while minerals and chemicals, especially phosphates deserve special mention. Though not ranking high in total value, Florida leads all of the States in the production of phosphate.

Will Florida Come Back

My answer to this question is that the real Florida has never been away. The recent boom in Flor-

ida may well be compared to a wild scramble in the stock market, when all sorts of speculative semi-speculative and even some good stocks sell for prices far in excess of any real values based on earning capacity.

During the boom northern capital poured into Florida without stint and boom towns were started on lands having little or no real value. The game was good so long as outside capital continued to come in, but once it stopped, the public began to wonder what it was all about—and if it had been a dream? All building operations stopped, apparently at once as if in the night; hence the great number of empty and unfinished buildings, and abandoned town-site projects well scattered over the State.

The permanent and basic industries of Florida will ever be the cultivation of citrus fruits and winter vegetables to the full extent that the market will absorb (there is no lack of suitable land); and caring for all the tourists that can be induced to spend their winters in a most delightful climate.

The lumber industry, as in Michigan, will necessarily come to an end.

The Roads

We entered Florida Wednesday morning, January 30, driving south from Dothan, Alabama, over U. S. 231, now under construction. (See Alabama and Its Roads in April 4th number of Michigan Roads and Pavements).

At the state line we were on a typical Florida road, limestone or sand-clay base (they both look alike when finished), surface treated with asphalt and slag chips, the latter being shipped in from Birmingham, Alabama. It was smoother than the average concrete, had wide shoulders, at least six feet, gentle front and back slopes all neatly seeded with bermuda grass and the roadsides were well kept. It was a perfect road picture and I now fully realized the meaning of the remark of Federal District Engineer Toms when he said: "You have a real treat coming when you ride over the Florida roads."

This type of road continued a little over 40 miles to the Apalachicola river. Here we saw our first long bridge. It was nine-tenths of a mile long, all wood trestle except over the stream proper, which was steel and probably not over 300 feet in length. The rest of the structure was required to span the wide flats, more or less flooded with every freshet. It was typically characteristic of the coastal plains streams on a large scale.

A Soft Limestone Quarry

A few miles over the Florida line, still in company with Col. Finnell, who had accompanied us from Montgomery, we visited a soft limestone quarry that was getting out the stone for the base of the Alabama road. It was the typical stone used for base on hundreds of miles of roads in Alabama, Florida and Georgia. Much of this stone is as soft as marl, but containing enough pieces of harder rocks, a few almost like marble, so that the whole product was put through a double set of crushing rolls and reduced to a three-fourths inch size.

The general specifications call for an 8-inch compacted base of this material, which after being opened to traffic for a time is re-scarified and planed with a blade grader until perfectly smooth. It is



Project 659, Road 3, Clay County

then usually given a light surface treatment of tar and again opened to travel for a short time, after which it is surface treated with asphalt and slag chips. Three to four-tenths of a gallon of asphalt and 40 to 45 pounds of slag chips to the square yard are used.

I never drove over more delightful riding road surfaces than are thus produced.

After crossing the river I found 20 miles of cement concrete leading to Quincy. The remainder of the road to Tallahassee via Havana was all sand-clay, but much of it was under construction as concrete—mostly on a relocation.

At Tallahassee I called on State Highway Engineer Cresap and the new chairman of his Board, Mr. Bentley. All were very busy due to a recent change in the personnel of the board and the approaching first meeting of the new board. However, they took time to receive me courteously and give all the information asked as well as anything they could think of that would be of use or interest to my trip through the State.

Florida has 58,680 square miles of area which is served by 38,000 miles of highways, some 6,000 miles of which are legally on the State system, though at this time the State is maintaining only about 3,000 miles. As in other Southern States there are no township roads, the counties being responsible for the construction and maintenance of all roads not on the State system.

The counties are not required to contribute toward the building of State roads, but are allowed to do so if they wish in order to expedite the building of the State trunk lines within their borders. In 1927 the counties thus contributed more than was received from automobile licenses, or about five millions of dollars.

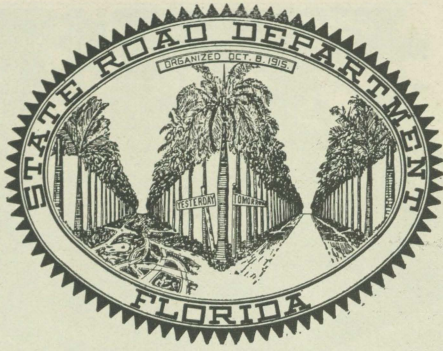
The State's total highway revenue from all sources in 1927 was a little over 19 millions, about one-fourth coming from the licensing and taxing (ad valorem basis) of motor vehicles, a little larger sum from the counties and the remainder from the gas tax and Federal aid.

Thursday, January 31, we drove from Tallahassee to Jacksonville, a distance of 172 miles. The road was all hard-surfaced except five miles of sand-clay which is slated for early construction. Bituminous surface-treated roads predominated, although there were many miles of concrete, especially on the Jacksonville end. This road was marked Florida No. 1, but really should be U. S. 90. I regret to report that none of the U. S. numbers have been erected in Florida. That was the only disappointing thing to me in the entire drive through the State, for I personally believe that a State so dependent as Florida on the tourist should do everything possible to co-ordinate its roads with the interstate system and mark them as such wherever the U. S. interstate numbers apply. It would at least please all motorists from other States.

On Friday, February 1, we drove from Jacksonville to St. Augustine. The distance is 40 miles and the roads were bituminous surfaced macadam, concrete and brick. They did not average as smooth as the roads between Tallahassee and Jacksonville. As in most States, the older roads do not present the smooth riding qualities that the new ones do.

St. Augustine is a quaint and interesting old town. Since it is the oldest town in the United States, it boasts the oldest house and revels in antiques.

They brag of the narrowest street in the world, only seven feet wide. It is closed to vehicular traffic by posts at both ends. I would call it an alley. We stayed there four days and just got into the spirit



Florida Highways

Published Monthly
Official Publication of the State Road Department

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of things when it was necessary to move on. Incidentally, I met Frank Beard, County Road Commissioner of Port Huron, who was passing through, and Judge Steere, late of the Supreme bench, who was making quite a stay and had become much interested in the town.

Monday, February 4, we started for Miami, taking the Ocean Boulevard, a toll road, between St. Augustine and Daytona. On the whole it was not as good as the State roads, but the view of the ocean, at intervals, was good, and since the waves were rolling rather high the drive was very interesting.

At the north edge of Indian River City, we turned west to Orlando, a distance of 37 miles. That looks like the most modern town in Florida. Its streets are all brick paved and the houses are of a modern bungalow type and most all stuccoed.

We sent a mixed box of oranges and grapefruit home from here, but before night repented that we had not sent the fruit from Indian River county, which was then picking some of the finest oranges we saw anywhere in Florida.

Returning to the Miami road again, we drove as far south as Vero Beach and put up for the night. I have already described the different types of roads, so that most of our driving was like giving the kaleidoscope a few more turns with nothing especially new or different.

On February 5, Tuesday, we drove into Miami. Now we were really getting into the tropics. The weather was warm and the palms (there are said to be 1,000 varieties in the world) began to be more of the tropical varieties. Coconut and royal palms were strikingly different.

Miami

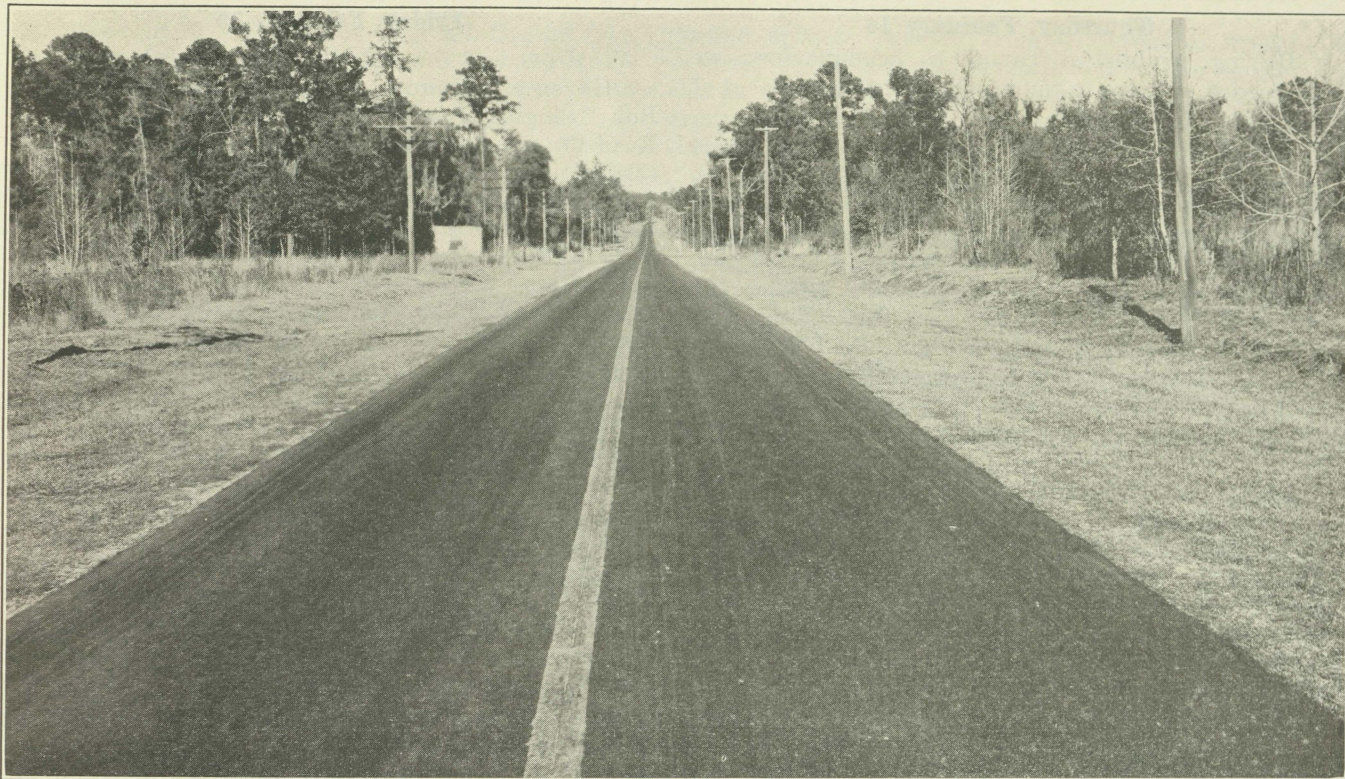
Miami is a colorful city. Population (A. A. A. guide), 147,000. It is truly a beautiful city, with its Biscayne Bay skirted by a wonderful boulevard of the same name. This consists of three wide paved driveways with beautifully landscaped parks on either side as well as between the driveways.

Fronting on the Boulevard is the city proper, with several large modern hotels facing the boulevard and overlooking the bay. These large hotels together with several high office buildings, present a sky line of which any city could well be proud.

The stuccoed buildings (all the new buildings are stuccoed) present a pleasing variety of colors, ranging from rich orange to an almost spotless white. The absence of factories with their black smoke helps to keep the town clean and truly it presents a pleasing contrast to the smoky industrial towns of the North—something that is greatly appreciated by the tourist. Anyone who wishes to turn winter into mid-summer cannot do better than visit Miami.

Miami Beach, reached by the great causeway and several other highways, contains all the bathing beaches, public and private, as well as the winter homes of many multi-millionaires. It is a separate municipality. Miami, without the Beach, would lose most of its popularity and all of its notoriety.

I did not drive to Key West, because that highway is interrupted by a 40-mile ferry, which really renders good service in waters quite well sheltered. Enroute to Havana I passed over the "Over-seas Railway" which skirts the highway and revealed what should have been a pleasant and easy drive had it not been for the long ferry.



Project 545, Road 5, Hernando County

On Tuesday, February 12, we left Miami over the Tamiami Trail and had what to me was the most interesting ride in Florida, in spite of the fact that many tourists are advised to avoid it on account of its lonesome monotony. After leaving the environs of Miami and Coral Gables, there is absolutely no population until the west coast of Florida is reached and there, on account of indenting bays, the road is well back and the first town we saw was Naples, which is only a hamlet with two hotels. It is 105 miles from Miami.

This road crosses the Everglades and its construction was a herculean task, though it presented no new engineering difficulties. The coral lime rock which underlies this whole region is very close to the surface. Near Miami the soil was about five feet deep and towards the westerly edge but a few inches, just enough to grow some rough grasses. Saw grass predominates.

Seventy miles of this work was through solid rock formation and the problem was to excavate a canal in the rock on the northerly side of the road, deposit the rock on the south bank, level it down and surface it for a highway. It is needless to say that the completed road is a surface-treated macadam having all the desirable riding qualities of the best of Florida's roads.

From Coral Gables, just west of Miami, the distance to Naples is 102 miles and this stretch of road cost \$5,084,317.12, an average cost of nearly \$50,000 a mile. But due to varying conditions the range was from \$30,000 to \$100,000 a mile.

Wild life along the road was abundant and interesting, ranging from fish and alligators in the canal to snakes on the road and birds in the air. Turkey buzzards and pelicans were present in flocks and hundreds of wild ducks were leisurely floating on the water. An Indian woman dressed in bright col-

ors carrying a papoose on her back in a sort of basket hanging from her shoulders was a reminder of the people who formerly inhabited this part of Florida—the Seminole Indians.

The drive from Naples to Fort Myers in the afternoon was without incident, except that for a short distance north of Naples the road was under construction, but happily in a new location so that the old, not very smooth, road was still open to travel.

Entering Fort Myers we passed the winter homes, side by side, of Henry Ford and Thomas A. Edison, who were both there at that time, the later just having celebrated his 82nd birthday. We did not see Edison, but Henry was out in front, apparently entertaining a flock of reporters.

The houses are both well back in broad lots so full of trees and shrubbery that they are not very visible from the highway. The lots extend back to the wide Caloosahatchee river, which is navigable for rather large boats.

Wednesday morning, February 13, we left Fort Myers after having spent a comfortable night in an interesting town with a delightful climate. The long avenue in the easterly part of the town shaded by a double row of royal palms is considered one of the most beautiful streets in the South.

The roads to Tampa were mostly the normal Florida roads, except that we encountered some old brick, and, in Hillsborough county, of which Tampa is the county seat, some asphalt block roads. Neither the brick nor the asphalt blocks presented such fine driving surfaces as do the slag top surface-treated roads. It is quite apparent in Florida, as in other Southern States, that where the counties contribute towards the cost of State roads they have a considerable voice in the selection of the materials of which the roads are built. For this reason types usually change at county lines.

Thursday, February 14

Having established Tampa as headquarters, we proceeded to drive to the nearby towns and places of interest.

Today we drove to St. Petersburg via the short route over the Gandy toll bridge. We found the bridge proper to be two and one-half miles long, spanning the narrows in an arm of Tampa Bay. An equal length of causeway had been filled in (suction dredge work) for bridge approaches, making the entire structure just a little over five miles. Toll was 65 cents for our roadster and two passengers.

St. Petersburg (47,000 A. A. A. guide) has adopted as a slogan, "The Sunshine City." The local papers are given away every day that the sun does not shine.

Probably no other city in Florida is so wholly given over to entertaining its guests as St. Petersburg. Benches are not only placed in the parks but on the sidewalks as well. The walks are wide and a row of benches set back to back with ends toward the curb are placed throughout the business district. On arriving and parking our car midway in one of the business blocks we found the benches so full of people that it was necessary to walk in the street on the pavement to the nearest cross-walk before it was possible to get onto the sidewalk. Some of the people were reading papers, others letters, but most of them were just sitting in the sun.

In the amusement parks we found horse-shoe pitching, shuffleboard, dominoes, checkers and chess all being played with much interest. Everyone is expected to play something part of the time. The weather was perfect and since everyone was resting or playing, one soon gets the notion very strong that this is an ideal place to come and—just rest.

Friday, February 15

We drove east through Plant City, Lakeland, Winter Haven and Dundee, thence south to the Edward Bok "Singing Tower," which is near Lake Wales. Roads were of the types and character already described.

The tower is an octagon 205 feet high surrounded by an iron fence and a moat. It has a carillon of 61 bells, the setting is ideal, on a knoll (locally called a mountain) with some natural second growth trees, mostly pines and oaks, which have been supplemented by some very artistic landscaping.

To the southeast, south and southwest are some of the finest citrus groves in all Florida, while to the northwest are some golf courses, club houses and millionaires' estates, all perfectly landscaped.

This is the heart of Florida's lake region and for those who do not care so much for the salt water, these inland towns and small lakes are very attractive while the winter climate is all that can be desired. The beautiful winter homes in several of these towns evidence the fact that all this is appreciated.

Saturday, February 16

We drove to Tarpon Springs and around the Gulf shore to St. Petersburg and back to Tampa around the north arm of Tampa Bay. Tarpon Springs, a town of less than 3,000 inhabitants, is chiefly interesting to the tourist from the fact that it is a port from which a large number of sponge divers work. There are said to be 75 boats thus engaged. Locally they claim to have the largest sponge gathering fleet in the world. Key West also has a large number of sponge divers and a few years ago claimed to have the largest business of this kind on the Gulf.

Each boat, manned by five or six men, forms a little company by itself, the men all working on a



Project 50, Road 14, Putnam County

percentage basis. The divers are all Greeks, the original sponge industry having started on the Mediterranean sea. Sponges are marketed only four times a year.

The drive along the Gulf coast through Clearwater, county seat of Pinellas county (in which St. Petersburg is located) was interesting and revealed many beautiful spots where a Northerner could spend the winter in comfort and with delightful surroundings.

Monday, February 18

We drove to Ocala, via Brooksville and Dunellon over Florida State Road No. 5 (U. S. 41 but not so marked) with a cross-over to the east on Florida 16. The distance was 111 miles and we arrived before lunch. What has already been said about Florida roads also applies here.

We passed several phosphate quarries and some orange groves. At Brooksville we shipped some oranges to the highway department from a packing firm that rendered better service than those heretofore patronized.

From Ocala we drove east five miles to Silver Springs—one of the most talked of natural wonders in Florida. As already noted, there are many under-

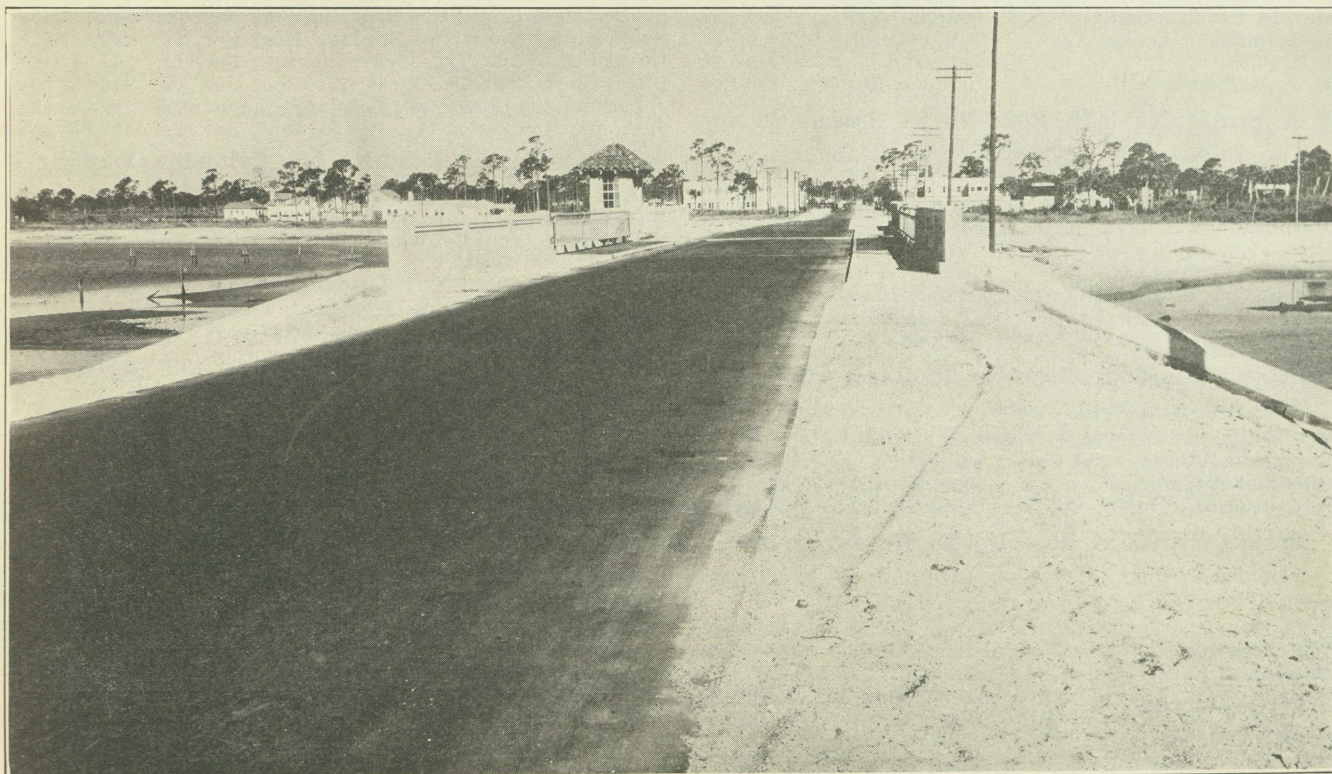
ground springs pouring from subterranean rocky caverns, but this is the largest, and is said to discharge more than one-half billion gallons of water every 24 hours. This water finds its way to the ocean through the Ocklawaha and St. Johns rivers.

A trip on the glass-bottomed boat disclosed many beautiful rock formations as well as animal and vegetable life. The water is so clear that the bottom could be seen at a depth of 80 feet.

A certain school of fish, being well fed many times a day on the arrival of this boat would rise to the surface and take bread from one's hand.

On Tuesday, February 19th, we drove north from Ocala to Baldwin, thence east to Jacksonville, thence north on the coastal highway, U. S. 17, to Savannah, Georgia. We crossed the St. Marys river at 11:00 a. m., 131 miles from Ocala, having finished three weeks of a most delightful sojourn in Florida.

During that time we drove some 1,900 miles over easy and pleasant driving roads, which, while not built to withstand the deep frosts of our winters nor the heavy trucking traffic found on most of our Northern roads, are really serving the Southland in a most satisfactory and economical manner—Michigan Roads and Pavements.



Project 614, Road 5, Sarasota County

Bedtime Yarns

"My dear," exclaimed the husband when he arrived home late and found his wife waiting for him, "you'd never guess where I have been tonight."

"Oh, yes, I can," replied his wife, "but go on with your story anyway."

"Mother," said the small boy, "do they have electric plants in heaven?"

"No, dear," replied the mother. "It requires engineers to build electric plants."

Streets of Gold

A bob-haired, scantily clad flapper was making her application at the pearly gates and St. Peter was putting her through her category.

"What was your occupation?" he inquired.

"Men called me a Gold-digger," she tittered.

"I'm sorry—but on account of the paving we can't let you in here!"

If you would take the real measure of a man, note the size of the things that make him mad.

Transactions at A Quarterly Meeting State Road Department April 10, 1929

THE second regular quarterly meeting of the State Road Department of Florida was held at the offices of the Department, in Tallahassee, on April 10th, 1929, with the following members present: Robert W. Bentley, Chairman; W. A. Shands, J. Harvey Bayliss and G. D. Perkins. J. L. Cresap, State Highway Engineer; B. A. Meginniss, Attorney; W. P. Bevis, Secretary, and H. J. Morrison, Highway Engineer for U. S. Bureau Public Roads, were also present.

Receipt of Bids

The hour of ten o'clock A. M. having arrived, the Department proceeded to open and read bids submitted pursuant to due advertisement on the projects hereafter set out, which projects, together with the bidders thereon and the amounts of their several bids are as follows:

F. A. Project No. 40-B, Road 4, Brevard County

The following bids were received for hydraulic approaches to Turkey Creek Bridge:

Waldeck-Deal Dredging Co.	Miami	\$17,245.70
Hollywood Dredging Co.	Fort Pierce	16,372.50
C. E. Lucas	Merritt	11,788.20
Murphy Construction Co.	Orlando	9,605.20
J. C. Johnston Constr. Co.	Tampa	14,735.25
J. B. Purdy	Lakeland	9,605.20
J. W. Williams	Daytona Beach	13,098.00

F. A. Project No. 62-B, Road No. 24, Osceola County

The following bids were received for concrete structures:

Central Florida Constr. Co.	Gr. Cove Spgs.	\$107,610.89
Murphy Construction Co.	Orlando	108,280.79
Frost Construction Co.	Tampa	106,423.88
Southern Bridge Co.	Tampa	110,649.08
Fla. Bridge & Constr. Co.	Orlando	104,952.42
Powell Bros.	Ft. Lauderdale	108,275.73
H. D. Spangler	Pompano	107,520.82

Project No. 806-A, Road No. 25, Hendry County

The following bids were received for clearing, grubbing, grading and drainage structures:

Everglades Construction Co.	Hialeah	\$34,204.29
Okeechobee Construction Co.	Okeechobee	29,984.30
R. C. Huffman Constr. Co.	Coral Gables	29,630.96

Project No. 806-C, Road No. 25, Hendry County

The following bids were received for clearing, grubbing, grading and drainage structures:

R. C. Huffman Constr. Co.	Coral Gables	\$43,990.60
Wilkins & Hobson	Cleveland	46,552.70
MacDougal Constr. Co.	Atlanta	45,549.47
R. B. Stewart	Fort Myers	40,692.16
Curry & Turner Constr. Co.	Bradenton	43,082.78
Everglades Const. Corp.	Hialeah	50,225.04
Okeechobee Constr. Co.	Okeechobee	45,425.80

Project No. 806-D, Road No. 25, Hendry County

The following bids were received for clearing, grubbing, grading and drainage structures:

Everglades Construction Co.	Hialeah	\$67,108.98
MacDougal Constr. Co.	Atlanta	67,084.86
R. C. Huffman Constr. Co.	Coral Gables	57,228.10

Project No. 518, Road No. 5-A, Lafayette County

Alternate bids were received as follows:

Duval Eng. & Con. Co., Jacks'ville, Slag Sur. Tr.	\$240,990.28
Duval Eng. & Con. Co., Jacks'ville, Rock Sur. Tr.	240,990.28
Broadbent Const. Co., Ocala, Slag Surf. Treat.	222,530.67
Broadbent Const. Co., Ocala, Rock Surf. Treat.	222,530.67
Broadbent Const. Co., Ocala, Bitum. Concrete	391,892.22
Broadbent Const. Co., Ocala, Sheet Asphalt.	382,613.32

Project No. 587, Road No. 5-A, Columbia County

Alternate bids were received as follows:

McLeod Const. Co., Tampa, Slag Surf. Treat.	\$55,174.78
McLeod Const. Co., Tampa, Rock Surf. Treat.	54,135.16
Manly Const. Co., Ocala, Slag Surf. Treat.	51,557.37
Manly Const. Co., Ocala, Rock Surf. Treat.	51,557.37
Manly Const. Co., Ocala, Bitum. Concrete	92,104.30
Manly Const. Co., Ocala, Sheet Asphalt	89,765.05
Duval Eng. & Con. Co., Jacks'ville, Slag Sur. Tr.	49,246.55
Duval Eng. & Con. Co., Jacks'ville, Rock Surf. Tr.	48,986.64

Project No. 715, Road No. 28, Union County

Alternate bids were received as follows:

Robt. G. Lassiter Co., Jacksonville, Slag Surf. Tr.	\$79,658.46
Robt. G. Lassiter Co., Jacksonville, Rock Sur. Tr.	79,041.25
R. G. Lassiter Co., Jax, Plain Cement Concrete	115,342.56
L. M. Gray, Gainesville, Slag Surf. Treat.	64,475.42

Project No. 716, Road No. 28, Union County

Alternate bids were received as follows:

R. G. Lassiter & Co., Jacksonville, Slag Surf. Tr.	\$197,269.55
R. G. Lassiter & Co., Jacksonville, Rock Sur. Tr.	195,953.00
R. G. Lassiter & Co., Jax, Plain Cement Concrete	265,236.70
L. M. Gray, Gainesville, Slag Surf. Treat.	150,406.85
F. W. Long & Co., Jacksonville, Slag Sur. Treat.	160,919.77
F. W. Long & Co., Jacksonville, Rock Sur. Tr.	160,261.50
L. B. McLeod Const. Co., Tampa, Slag Surf. Tr.	159,206.70
L. B. McLeod Const. Co., Tampa, Rock Surf. Tr.	156,573.60
Southeastern Const. Co., Brad'ton, Slag Sur. Tr.	172,236.65
Southeastern Const. Co., Brad'ton, Rock Sur. Tr.	169,603.55
Duval En. & Cont. Co., Jacks'ville, Slag Sur. Tr.	144,112.12
Duval En. & Cont. Co., Jacks'ville, Rock Sur. Tr.	143,453.85
J. C. Johnston Const. Co., Tampa, Slag Surf. Tr.	197,301.55
J. C. Johnston Const. Co., Tampa, Rock Sur. Tr.	194,668.25

Project No. 718, Road No. 5-A, Columbia County

Alternate bids were received as follows:

Duval En. & Cont. Co., Jacks'ville, Slag Sur. Tr.	\$ 92,959.49
Duval En. & Cont. Co., Jacks'ville, Rock Sur. Tr.	92,447.23
L. B. McLeod Const. Co., Tampa, Slag Surf. Tr.	104,233.59
L. B. McLeod Const. Co., Tampa, Rock Surf. Tr.	102,304.53
Manly Const. Co., Ocala, Slag Surf. Treat.	93,241.76
Manly Const. Co., Ocala, Rock Surf. Treat.	93,241.76
Manly Const. Co., Ocala, Bitum. Concrete	168,477.25
Manly Const. Co., Ocala, Sheet Asphalt	164,136.70

Project No. 587-B, Road No. 5-A, Columbia County

The following bids were received for reinforced concrete bridge over the Itchtucknee River:

Perkins & Lawson	Valdosta, Ga.	\$10,368.84
Okeechobee Const. Co.	Okeechobee	11,995.30
Southern Bridge Co.	Tampa	17,035.40
Fla. Bridge & Const. Co.	Orlando	14,791.47
C. T. Dawkins, Inc.	Tampa	12,915.35

Project No. 678, Road No. 10, Bay County

The following bids were received for hauling rock:

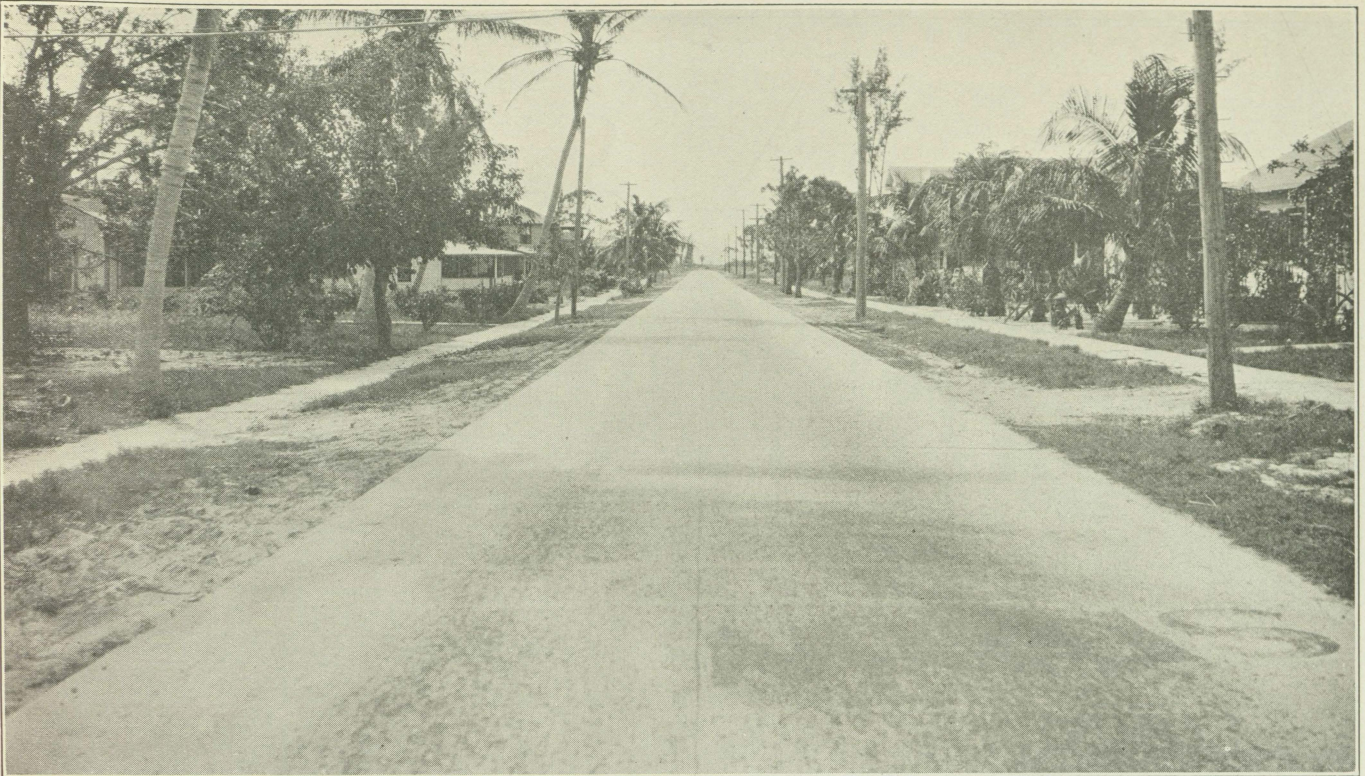
McVay, Lindsay & Son	Palm Beach	\$12,600.00
J. W. Quillian	Daytona Beach	12,825.00
J. M. Faile	Panama City	12,915.00

Project No. 755, Road No. 17, Polk County

The following bids were received for furnishing and delivering approximately 2,500 yards riprap stone:

A. T. Thomas Co.	Ocala	\$5,000.00
Cummer Lumber Co.	Jacksonville	5,125.00
A. A. Griffin	Williston	7,250.00
Ocala-Tampa Lime Rock Co.	Ocala	5,175.00
Standard Rock Co.	Morrison	5,125.00
Connell & Schultz	Inverness	4,375.00
L. B. McLeod Const. Co.	Tampa	5,500.00
Ocala Lime Rock Corp.	Ocala	5,800.00

After reading the bids listed above, Mr. Shands made a motion, seconded by Mr. Perkins, that the announcement of awards be made tomorrow morning at ten o'clock, which motion was duly carried.



Project 683-A, Road 4, Palm Beach County

Sale of Surplus Materials at Equipment Division

Mr. Geo. W. Trout, representative of Government Surplus Goods Company, of Jacksonville, appeared before the Department with reference to purchasing surplus and useless materials now in the Equipment Division at Gainesville.

On motion of Mr. Shands, seconded by Mr. Perkins, the following resolution was adopted:

BE IT RESOLVED, That the Chairman be and he is hereby authorized to advertise for bids for the sale of all surplus and useless materials in the Equipment Division at Gainesville, and that the Superintendent of such Division be instructed to prepare and submit to the Chairman at Tallahassee a list of such surplus and useless materials or articles.

Flagler County, Road 28

Messrs. E. F. Warner, Z. G. Holland, A. S. Fowler and W. R. Reynolds appeared before the Department and requested the members to reconsider their action in locating State Road 28 on the northern route in Flagler county and to adopt the southern route in lieu thereof. After a lengthy discussion of the matter, the following resolution was, on motion of Mr. Shands, seconded by Mr. Bayliss, unanimously adopted:

BE IT RESOLVED, That the Department now proceed with its regular order of business.

Jefferson County, Roads 42 and 96

Messrs. P. H. Boland, R. H. Herring, J. E. Lewis, J. A. McClellan, B. O. Granger and S. D. Clarke comprised a delegation which appeared before the Department with reference to the program of the Department relative to Roads 42 and 96 in that county.

On motion of Mr. Shands, seconded by Mr. Bayliss, the following resolution was unanimously adopted:

RESOLVED, That this Department do accept from Jefferson County its funds available for the construction of a grade on State Road 96 and that the Chairman be and he is hereby authorized to advertise for bids for the construction of the same.

BE IT FURTHER RESOLVED, That upon the completion of said grade that this Department do hereafter maintain the same.

BE IT FURTHER RESOLVED, That when Jefferson county shall make available to the State Road Department the necessary money therefor, that the Department pursue the same policy with respect to State Road No. 42 in said county.

On motion of Mr. Shands, seconded by Mr. Bayliss, the Department was adjourned until 2 o'clock P. M.

AFTERNOON SESSION, 2 O'CLOCK

Present as at morning session.

Okeechobee County

Messrs. Peter Tomasello, Jr., T. W. Conely and C. E. Simmons of Okeechobee county presented to the Department the claim of that county that the Department is indebted to the county in the sum of \$210,000.00 and requested a refund of that amount. Further discussion and consideration of the request was deferred until tomorrow, when Mr. R. Y. Patterson will appear with the other members of the delegation relative to the matter.

Sumter County, Roads 23 and 36

Mr. S. W. Getzen, representative of Sumter county, presented to the Department the following requests:

(1) That the State construct and maintain State Road 23 in that county.

(2) That the Department take over for maintenance that portion of Road 36 between Leesburg and Inverness, via Wildwood, which is now completed,



Project 53-B, Dora Canal Bridge, State Road 2, Lake County

and that it complete the construction of said road, including the bridges.

On motion of Mr. Shands, seconded by Mr. Perkins, the following resolution was adopted:

BE IT RESOLVED, That the request of Sumter county as presented by Representative Getzen be taken under consideration and that he be advised of the action of this Department thereon before its adjournment.

Road No. 84, Calhoun County

Messrs. Henry McClellan, J. J. Clemens, W. H. Harrell, Lum Lewis, R. J. Flanders and Sam Adkins of Calhoun county appeared before the Department and requested that the State construct the culverts and bridges on Road 84 between Marianna and Wewahitchka.

On motion of Mr. Shands, seconded by Mr. Perkins, the request was taken under advisement.

Asphalt Specifications

A delegation consisting of L. G. Hitchcock, K. Stern, Joe Couch, E. L. Anderson and W. V. Newsome presented to the Department a request that there be inserted in the standard specifications an alternate specification for Natural or Lake Asphalt.

On motion of Mr. Shands, seconded by Mr. Perkins, the following resolution was adopted.

BE IT RESOLVED, That there be included in the standard specifications of this Department an alternate specification covering natural or lake asphalt, and that the State Highway Engineer be directed to work out such specification, which shall be subject to approval by the U. S. Bureau of Public Roads.

Concrete Curing by Process

The same delegation presented to the Department a request that there be included in the specifications for curing concrete a specification of curing by an asphalt coating. No formal action was taken, but

the delegation was informed that the request would be taken under consideration and considered in connection with the Bureau of Public Roads.

Inspection of Road Materials

Messrs. H. C. Nutting and O. K. Fletcher, representing H. C. Nutting Company, Tampa, Florida, submitted to the Department a formal proposition for the inspection of various materials used in highway construction. The original proposal, dated at Tampa, April 9, 1929, and signed on behalf of the company by H. C. Nutting, has been placed in the files of the Department and is made a part of these minutes by reference, as if fully set out herein. The prices in brief are as follows:

Cement testing and inspection, 1½c per barrel.

Testing reinforcing steel, 20c per ton.

Testing by individual samples, \$1.50 per sample.

Testing structural steel, 75c per ton.

Inspecting creosoted timber, \$1.00 per MBFM for lumber, 1c per lin. ft. for piling.

On motion of Mr. Shands, seconded by Mr. Perkins, the following resolution was adopted:

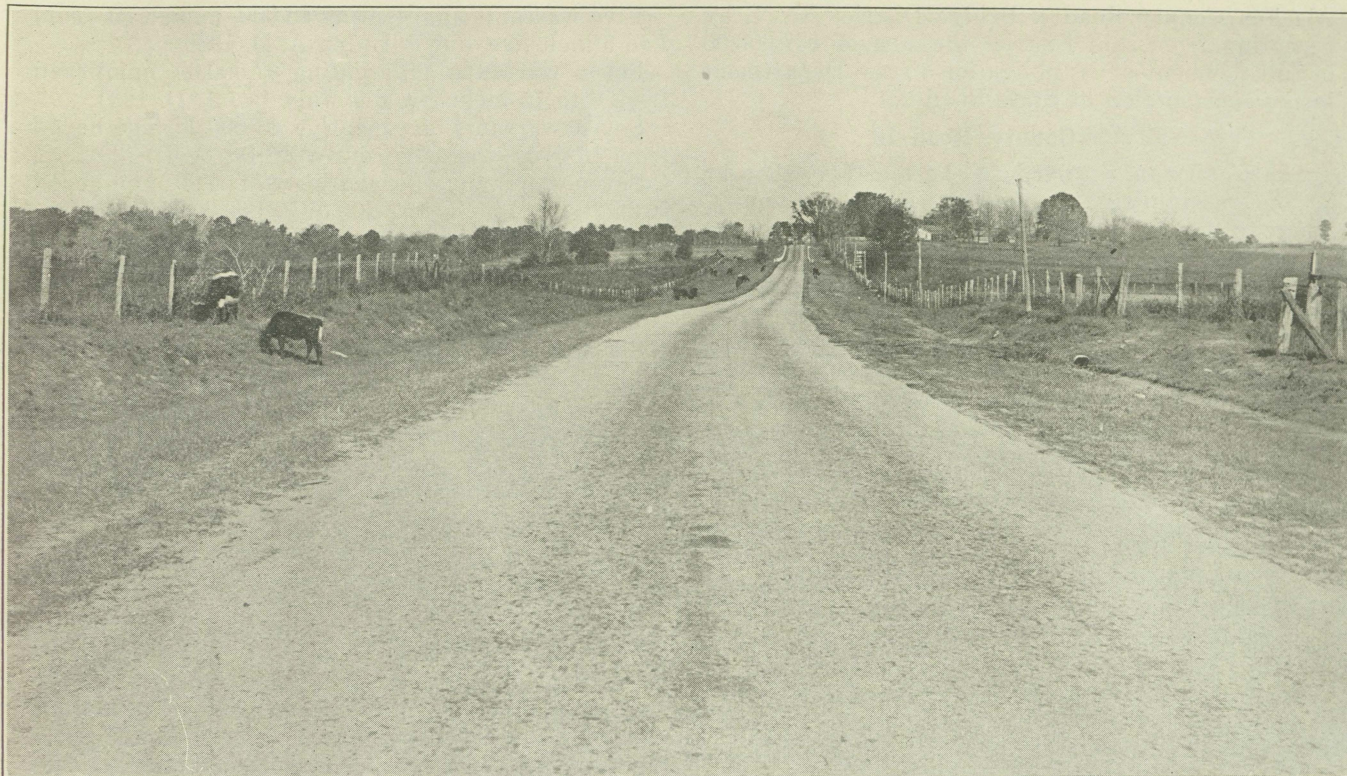
BE IT RESOLVED, That the State Road Department do employ H. C. Nutting Company, Tampa, Florida, on the basis of its proposal submitted today, to make for the Department all inspection of cement, structural and reinforcing steel and creosoted timber.

Proposed Change of Specification of Reinforcing Bars

Messrs. B. F. King and H. P. Barton appeared with a request that there be a change in the standard specifications so as to permit the use of rail steel reinforcing bars in reinforced culvert work.

On motion of Mr. Shands, seconded by Mr. Perkins, the following resolution was adopted:

BE IT RESOLVED, That the Engineering Department be directed to confer with the Bureau of Pub-



Project 574, Road 9, Madison County

lie Roads, and if acceptable to said Bureau to amend the standard specifications so as to permit the use of rail steel reinforcing bars in reinforced culvert work.

Project 669-Y, Road 27, Collier County

Messrs. T. W. Bryant and John E. Ballenger, representing Wm. P. McDonald Construction Company, appeared before the Department with further reference to its claim for work done on Project 669-Y, Road 27, in Collier county. There was presented at that time a bill in the sum of \$7,829.31, which had been duly examined by the Auditor and the State Highway Engineer.

On motion of Mr. Perkins, seconded by Mr. Shands, the following resolution was adopted:

BE IT RESOLVED, That the Department does hereby approve and allow the claim of Wm. P. McDonald Construction Company for work on Project 669-Y, Road 27, Collier county, in the sum of \$7,829.31, together with an additional sum of not to exceed one and one-half of one per cent of the amount last above mentioned, as and for the premium paid on contract bond in connection with such work.

Alachua County, Road 31

J. L. Cresap, State Highway Engineer, presented to the Department a report with reference to the proposed enlargement of the opening on State Road 31, in order to permit the drainage of Paynes Prairie through the same into Orange Lake. Mr. Cresap stated that it was proposed to enlarge the opening, using State forces, and by adding five spans of bridge to the present opening, at an approximate cost of \$3,750.00.

On motion of Mr. Shands, seconded by Mr. Bayliss, the following resolution was adopted:

BE IT RESOLVED, That the State Highway En-

gineer be authorized to make the necessary enlargement of the opening on State Road 31, to permit the drainage of Paynes Prairie into Orange Lake, with State forces, by adding to the present opening five spans of bridge.

West Florida Storm Damage

The Chairman presented to the members a report of the extent of damage to State roads by the recent flood. The Chairman stated that the estimate which has been made of the damage indicates that it will run to \$150,000.00. In connection with the report, the Chairman took occasion to compliment the engineers and the State forces on their excellent work in restoring traffic. He stated that the engineers have recommended that a concrete surface be placed across Choctawhatchee Swamp and Yellow River fill and that a concrete apron be placed on the downstream side.

On motion of Mr. Shands, seconded by Mr. Bayliss, the following resolution was unanimously adopted:

BE IT RESOLVED, That the Department adopt the recommendation of its Engineering Department, to place a concrete surface on State Road 1 across the Choctawhatchee Swamp and Yellow River fill and a concrete apron on the down-stream side at the points mentioned.

Alachua County, Road 2

There was presented to the Department a request from Alachua County Road & Bridge District No. 1, that it be relieved of its obligation to the State Road Department on the construction of State Road 2 in said District.

On motion of Mr. Bayliss, seconded by Mr. Perkins, the following resolution was adopted:

BE IT RESOLVED, That Mr. Shands, member of this Department, be authorized to settle with

Alachua County Road & Bridge District No. 1, by accepting from said District the sum of \$37,000.00 in full payment of its obligation to the Department in the construction of State Road 2.

Taylor County, Road 19

The Chairman reported to the members that he has entered into an arrangement with Taylor county whereby the construction of Road 19 in said county will proceed with the use of the county's equipment and until the funds applicable to said construction by Taylor county, to-wit: \$7,500.00 per mile, shall have been exhausted, and with the understanding that the Department will thereafter make arrangement to continue the work, using State funds.

Dixie County, Road 19

The Chairman reported to the members that in pursuance of the resolution heretofore adopted, the Department has received from the County Commissioners of Dixie county \$75,000.00 of interest-bearing coupon time warrants, dated April 1, 1929, and bearing interest at the rate of six per cent per annum, said warrants maturing serially to and including July 1st, A. D. 1940. That he has issued to the County Commissioners his receipt for said warrants, in which the Department agrees to sell the same and apply the proceeds thereof solely and only to the surfacing of that part of State Road 19 between Cross City and the Suwannee river. He stated that the County Commissioners have agreed that they will secure the passage of legislation validating the issuance of said time warrants, after which, with the approval of the Department, it is his desire to sell the warrants and proceed with the work.

On motion of Mr. Shands, seconded by Mr. Bayliss, the following resolution was unanimously adopted:

WHEREAS, Dixie County has issued and delivered to this Department \$75,000.00 of 6% Interest Bearing Time Warrants, in the denomination of \$1,000 and maturing serially to and including July 1st, A. D. 1940, as will appear by reference to resolution of the Board of County Commissioners of Dixie County, duly adopted March 26, 1929, a certified copy of which is in the files of this Department; and

WHEREAS, This Department has heretofore proposed to Dixie County that it would receive and sell said time warrants and apply the proceeds solely to the hard-surfacing of that section of State Road 19 between Cross City and the Suwannee river; and

WHEREAS, The said county has agreed to secure the passage of legislation validating and confirming the said issue of time warrants; and

WHEREAS, The Chairman of this Department has issued to the County Commissioners his receipt for said time warrants, in the words and figures following, to-wit:

The State Road Department of Florida hereby acknowledges receipt from the Board of County Commissioners of Dixie County of seventy-five (75) Interest Bearing Coupon Time Warrants, each dated April 1st, 1929, and each in the denomination of One Thousand (\$1,000.00) dollars, aggregating Seventy-five Thousand (\$75,000.00) dollars, said warrants bearing interest at the rate of six per cent per annum, represented by coupons attached to said warrants, said interest being payable annually. Said time warrants maturing and becoming due as follows, to-wit:

Five warrants aggregating \$5,000, numbered from 1 to 5 inclusive, due July 1st, A. D. 1930.

Seven warrants, aggregating \$7,000.00, numbered from 6 to 12 inclusive, due July 1st, A. D. 1931.

Seven warrants, aggregating \$7,000.00, numbered from 13 to 19, inclusive, due July 1st, A. D. 1932.

Seven warrants, aggregating \$7,000.00, numbered from 20 to 26 inclusive, due July 1st, A. D. 1933.

Seven warrants, aggregating \$7,000.00, numbered from 27 to 33 inclusive, due July 1st, A. D. 1934.

Seven warrants, aggregating \$7,000.00, numbered from 34 to 40 inclusive, due July 1st, A. D. 1935.

Seven warrants, aggregating \$7,000.00, numbered from 41 to 47 inclusive, due July 1st, A. D. 1936.

Seven warrants, aggregating \$7,000.00, numbered from 48 to 54 inclusive, due July 1st, A. D. 1937.

Seven warrants, aggregating \$7,000.00, numbered from 55 to 61 inclusive, due July 1st, A. D. 1938.

Seven warrants, aggregating \$7,000.00, numbered from 62 to 68 inclusive, due July 1st, A. D. 1939.

Seven warrants, aggregating \$7,000.00, numbered from 69 to 75 inclusive, due July 1st, A. D. 1940.

Said time warrants are issued under the authority of Chapter 10479 and are to be sold by the State Road Department and the proceeds thereof to be applied solely and only to the hard-surfacing of that part of State Road No. 19 between Cross City and the Suwannee river. Said Road Department having by resolution agreed that upon the issuance of said warrants and delivery of same to this Department, it would hard-surface said section of said road.

Dated at Tallahassee, Florida, this 9th day of April, A. D. 1929.

STATE ROAD DEPARTMENT OF FLORIDA,

By Robert W. Bentley, Chairman.

NOW, THEREFORE, BE IT RESOLVED, That the action of the Chairman in issuing said receipt be and the same is hereby approved.

BE IT FURTHER RESOLVED, That when the said time warrants shall have been duly validated by legislative action, that the Chairman do proceed to advertise for bids for the sale of said time warrants.

BE IT FURTHER RESOLVED, That the Chairman be and he is hereby authorized to advertise for bids for the construction of that part of State Road 19 in Dixie county between Cross City and the Suwannee river, or to build same with convict labor, and that upon receipt of bids and due and regular award of contract, that he be and he is hereby authorized to proceed with the work of construction.

Award of Contracts Approved

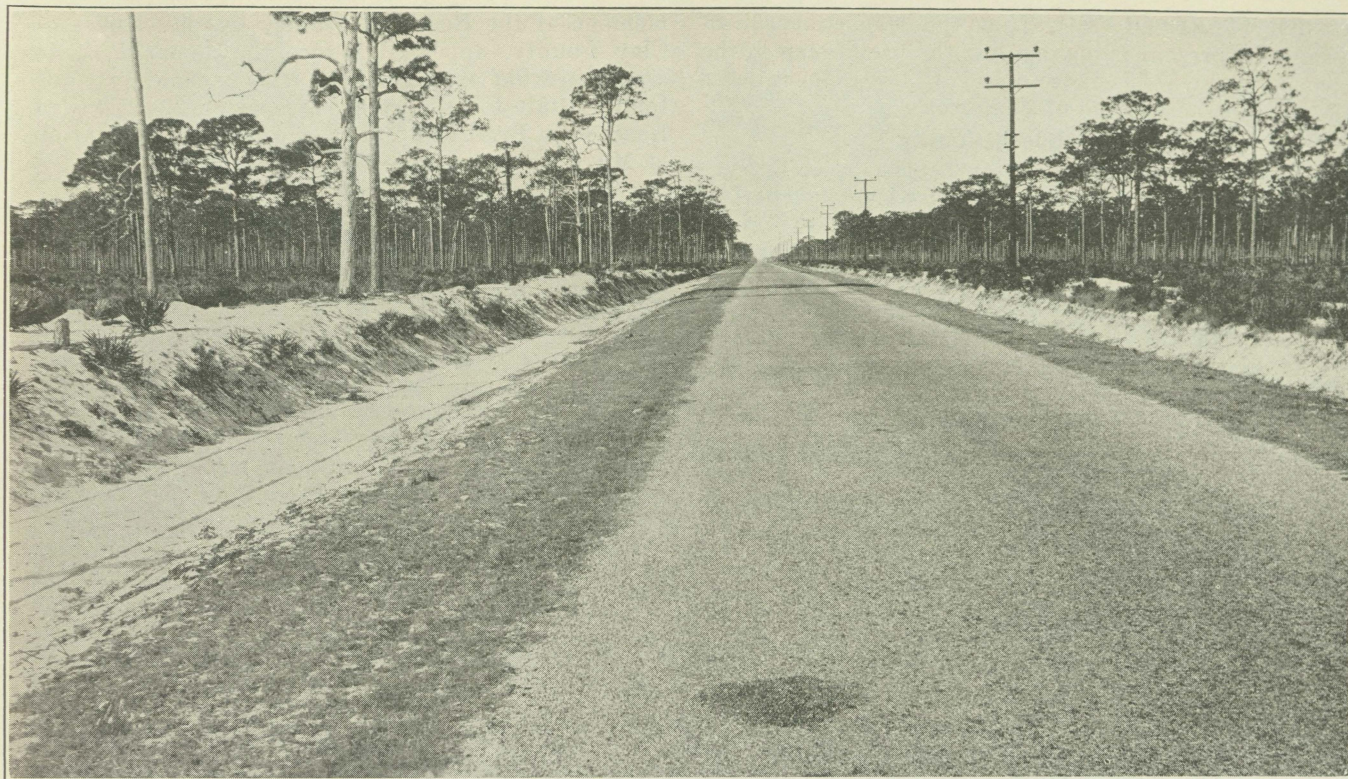
On motion of Mr. Bayliss, seconded by Mr. Shands, the following resolution was adopted:

WHEREAS, This Department advertised for bids for the construction of the projects hereinafter mentioned, and

WHEREAS, The firms mentioned were found and determined to be the lowest responsible bidders therefor;

NOW, THEREFORE, BE IT RESOLVED, That the action of the Chairman in awarding and executing contracts on said projects be and the same is hereby approved, which said contracts are as follows, to-wit:

Project 686-767, Road 10, Bay County. Erection of timber bridge awarded to H. W. Johnson, Panama City, at and for \$2,334.44.



Project 655, Road 18, Highlands County

Project 661, Road 2, Lake County. Sheet asphalt surface, awarded to Manly Construction Company, Leesburg, at and for \$8,466.50.

State Road 125, Escambia County

The Chairman reported that he had inspected the three miles of State Road 125 just out of Pensacola, as directed by resolution adopted at the last meeting of the Department, and that he found that the said road does not meet State specifications.

On motion of Mr. Bayliss, seconded by Mr. Shands, the following resolution was adopted:

WHEREAS, a request was made that the State Road Department take over for maintenance three miles of State Road 125 just out of Pensacola, in Escambia county, and

WHEREAS, After investigation, the Chairman has found and reported that the same does not meet State specifications;

BE IT RESOLVED, That the Chairman be and he is hereby authorized to advise Escambia County that the Department can not take the same over for maintenance.

State Road 14—Gilchrist County

Mr. Shands, member of the Department, in pursuance of resolution adopted at the last meeting, reported on the status of State Road 14 in Gilchrist county. He recommended that the Department call on the county for \$45,000.00 and that it proceed to hard-surface that section of the road between Trenton and the Suwannee county line.

On motion of Mr. Shands, seconded by Mr. Perkins, the following resolution was adopted:

BE IT RESOLVED, That the Chairman be and he is requested to call upon Gilchrist county for the sum of \$45,000.00, to be used in the hard-surfacing of Road 14 in said county.

BE IT FURTHER RESOLVED, That upon receipt

of said sum from the county, that the Chairman be and he is hereby authorized to advertise for the construction of that portion of said road in said county between Trenton and the Suwannee county line.

Sumter County—Roads 23 and 36

On motion of Mr. Shands, seconded by Mr. Bayliss, the following resolution was adopted:

BE IT RESOLVED, That the Chairman be and he is hereby requested to advise Hon. S. W. Getzen, Representative of Sumter county, that the Department's budget for the year has been made up and the Department can not comply with the request to construct or maintain any portion of State Roads 23 and 36.

Calhoun County—Road 84

On motion of Mr. Shands, seconded by Mr. Bayliss, the following resolution was adopted:

BE IT RESOLVED, That the Chairman be and he is hereby authorized to advise the representatives of Calhoun county that the Department is not authorized to expend funds on State Road 84 or the bridges and culverts thereof, as requested by the delegation on yesterday.

On motion of Mr. Shands, seconded by Mr. Bayliss, the Department was adjourned until 9 o'clock A. M. April 11, 1929.

APRIL 11, 1929

The Department met at 9 o'clock A. M. pursuant to adjournment. Present as on yesterday.

Use of Slag in Construction of Concrete Roads

The Chairman reported to the members that in pursuance of the resolution adopted at the last meeting he has made an inspection of slag built concrete roads in certain sections of Georgia as well as in this State. After a discussion of the matter the following resolution, on motion of Mr. Shands and seconded by Mr. Perkins, was unanimously adopted:

BE IT RESOLVED, That the Department continue its present policy against the use of slag in the construction of concrete roads until it is convinced of the wisdom of such use.

Okeechobee County

Messrs. T. W. Conely, Peter Tomasello, C. E. Simmons and R. Y. Patterson appeared before the Department with further reference to their request made on yesterday, that the Department refund to Okeechobee county the sum of \$210,000.00 alleged to be due the county by the Department. After some discussion of the matter, the following resolution, moved by Mr. Shands and seconded by Mr. Perkins, was unanimously adopted:

BE IT RESOLVED, That the Chairman be and he is hereby authorized to take up with former members of the Department the matter of the adoption of a resolution presented by the representatives of Okeechobee county and alleged to have been adopted by the Department.

BE IT FURTHER RESOLVED, That when the Chairman shall have secured the information sought, that he be and he is hereby authorized to call a special meeting of this Department for the further consideration of this matter.

Project 630—Claim of Bank of Okeechobee

Mr. Peter Tomasello, Receiver of the Bank of Okeechobee, appeared before the Department and called to its attention the fact that there is still a balance due Myers Construction Company on Project 630 and that the Bank of Okeechobee has on file with the Department an assignment of said balance executed by the contractor.

On motion of Mr. Shands, seconded by Mr. Bayliss, the following resolution was adopted:

BE IT RESOLVED, That the Department do pay over to the Receiver of the Bank of Okeechobee the balance due to Myers Construction Company on Project 630, in accordance with an assignment of said balance given by the contractor to said bank.

Road 30 Between Vero Beach and Frostproof

The Chairman directed the attention of the members to a request that it take over for maintenance State Road 30 between Vero and Frostproof.

On motion of Mr. Shands, seconded by Mr. Bayliss, the following resolution was adopted:

BE IT RESOLVED, That the engineers of the Department make an investigation of State Road 30 to ascertain whether or not the same has been constructed in accordance with State specifications.

BE IT FURTHER RESOLVED, That when they have made their investigation that they report their findings to this Department for consideration in connection with the request that said road be taken over for maintenance.

Leon County—Road 10

Dr. C. M. Ausley, member of the Board of County Commissioners of Leon County, appeared before the Department and requested assurance that if Leon County shall divert its bond funds applicable to State Road 19 to State Road 10, that the Department will construct said Road 19 of concrete. No action was taken by the Department and Dr. Ausley announced that he would appear later with reference to the same matter.

Road 48—Bradford and Clay Counties

Senator T. J. Knabb and Mr. F. W. Buddington,

member of the Board of County Commissioners of Clay County, appeared before the Department to ascertain what arrangements, if any, could be made for the State to take over the completed portions of Road 48 in Bradford and Clay counties. On motion of Mr. Perkins, seconded by Mr. Bayliss, the following resolution was adopted:

BE IT RESOLVED, That the engineers of this Department be directed to inspect the completed portions of State Road 48 in Bradford and Clay counties and to report what may be required to bring the same up to State specifications.

Award of Contracts

On motion of Mr. Perkins, seconded by Mr. Shands, the following resolution was unanimously adopted:

WHEREAS, This Department, after due advertisement, on yesterday received bids for the construction of the projects hereinafter designated, and

WHEREAS, the firms and individuals hereinafter named are and have been determined to be the lowest responsible bidder for the respective contracts hereinafter named, Now, Therefore,

BE IT RESOLVED, That contracts for the construction of the projects hereinafter listed be and they are hereby awarded, as follows:

F. A. Project 40-B, Road 4, Brevard County—Hydraulic approaches to Turkey Creek Bridge.	
I. B. Purdy, Lakeland	\$ 9,605.20
F. A. Project 62-B, Road 24, Osceola County—Concrete bridges—Florida Bridge & Construction Co., Orlando	\$104,952.42
Project 587-B, Road 5-A, Columbia County—Concrete bridge over Itchtucknee river—Perkins & Lawson, Valdosta, Ga.	\$ 10,368.84
Project 518, Road 5-A, Lafayette County—Rock surface treatment—Broadbent Construction Co., Ocala	\$222,530.67
Project 587, Road 5-A, Columbia County—Rock surface treatment—Duval Engineering & Contracting Co., Jacksonville	\$ 48,986.64
Project 715, Road 28, Union County—Surface treatment—Awarded to L. M. Gray, Gainesville, with request that he use Florida rock	\$ 64,475.42
Project 716, Road 28, Bradford County—Rock surface treatment—Duval Engineering & Contracting Co., Jacksonville	\$143,453.83
Project 806-A, Road 25, Hendry County—Clearing, grubbing, grading and drainage structures. R. C. Huffman Const. Co., Coral Gables	\$ 29,630.96
Project 806-C, Road 25, Hendry County—Clearing, grubbing, grading and drainage structures. R. B. Stewart, Fort Myers	\$ 40,692.16
Project 806-D, Road 25, Hendry County—Clearing, grubbing, grading and drainage structures. R. C. Huffman Const. Co., Coral Gables	\$ 57,228.10
Project 678, Road 10, Bay County—Hauling rock. McVay Lindsey & Son, Palm Beach	\$ 12,600.00
Project 755, Road 17, Polk County—Furnishing and delivering 2,500 yards riprap stone—Connell & Shultz, Inverness	\$ 4,375.00

Project 718, Road 5-A, Columbia County

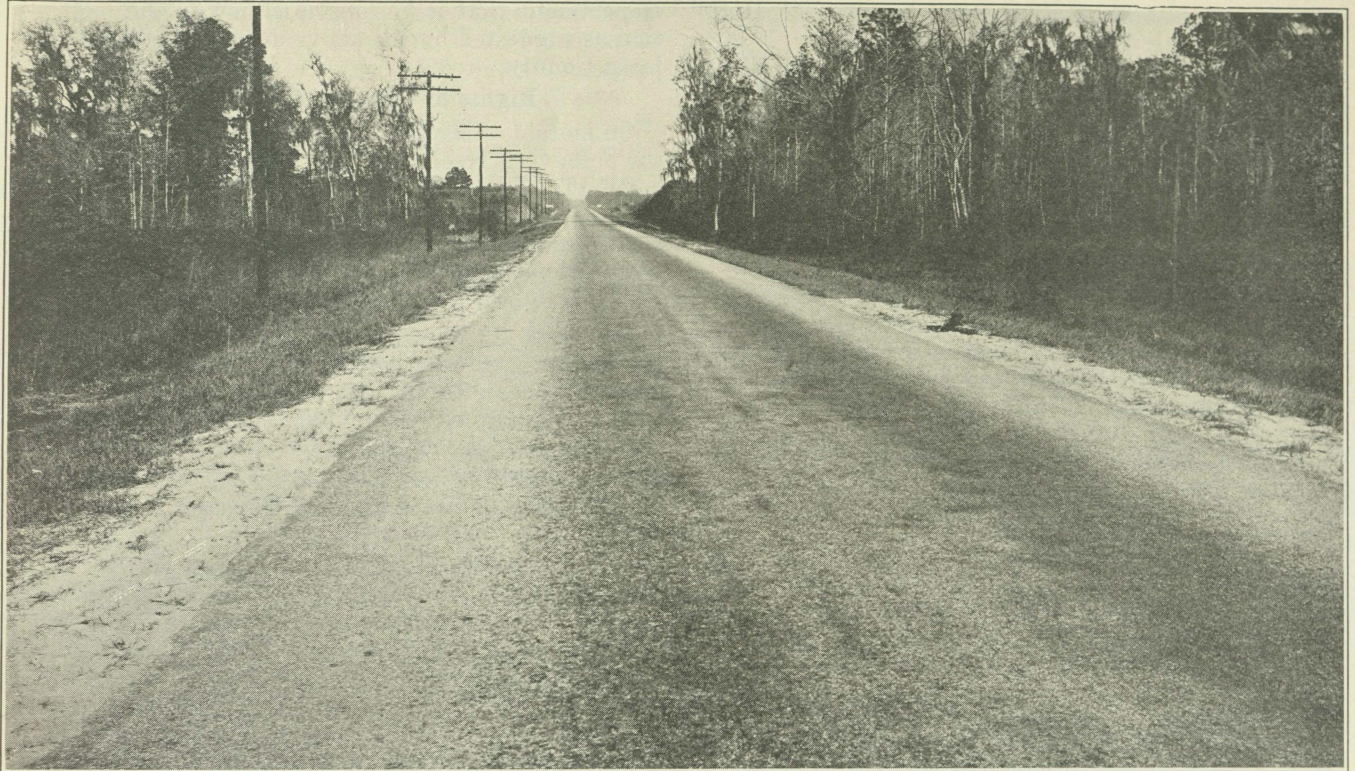
On motion of Mr. Shands, seconded by Mr. Bayliss, the following resolution was adopted:

BE IT RESOLVED, That action on the bids submitted for the construction of Project 718 be withheld until the Department's engineers have made an actual survey of the amount of the excavation required, and

BE IT FURTHER RESOLVED, That the Chairman be then authorized to award and execute contract therefor to the lowest responsible bidder.

Purchase of Rock

On motion of Mr. Shands, seconded by Mr. Bayliss, the following resolution was unanimously adopted:



Project 571, Road 1, Madison County

RESOLVED, That the Chairman be and he is hereby authorized to purchase the lime rock requirements of this Department for use on State Road 10, Project 678, Bay County.

Road 5-A, Extra Width Paving and Curb and Gutter in Mayo

On motion of Mr. Shands, seconded by Mr. Bayliss, the following resolution was adopted:

WHEREAS, the Town of Mayo has requested this Department to construct curb and gutter and extra width paving on State Road 5-A through the said town, Now, therefore,

BE IT RESOLVED, That if the said Town of Mayo shall turn over to this Department the sum of \$5,000.00, the Department will construct curb and gutter and extra width paving through said town, as requested.

Project 718, Road 5-A, Columbia County

Mr. George H. Hodges, representing Duval Engineering & Contracting Company, appeared before the Department with reference to his bid submitted yesterday for construction of Project 718. It was explained to Mr. Hodges that the Department has withheld its action on the bid, pending an actual survey of the amount of excavation required, because of the possibility that if the excavation is much in excess of the amount estimated it may result in Broadbent Construction Company being the low bidder instead of Duval Engineering & Contracting Company.

On motion of Mr. Shands, seconded by Mr. Bayliss, the Department was adjourned until 1:30 o'clock P. M.

AFTERNOON SESSION—1:30 O'CLOCK

The Department met pursuant to adjournment. Present as at morning session.

Re-Arrangement and Reduction of Number of Divisions

On motion of Mr. Perkins, seconded by Mr. Shands, the following resolution was unanimously adopted:

WHEREAS, It is the judgment of the members of this Department that its work as now outlined can be efficiently carried on by five divisions of the State instead of seven, as now constituted, and

WHEREAS, the re-arrangement of the counties into five divisions and the elimination of two as they now exist will effect a great saving to the State, Now, therefore,

BE IT RESOLVED, That the State of Florida be redistricted in accordance with the following plan, that is to say:

1st Division, with headquarters at Marianna, shall consist of the following counties: Escambia, Santa Rosa, Okaloosa, Walton, Holmes, Washington, Bay, Jackson, Calhoun, Gulf, Gadsden, Liberty, Franklin, Leon, Wakulla and Jefferson.

2nd Division, with headquarters at Lake City, shall consist of the following counties: Madison, Taylor, Suwannee, Lafayette, Dixie, Hamilton, Columbia, Baker, Union, Bradford, Duval, Nassau, Clay and St. Johns.

3rd Division, with headquarters at West Palm Beach, shall comprise the following counties: Brevard, Indian River, Okeechobee, St. Lucie, Martin, Glades, Hendry, Lee, Collier, Palm Beach, Broward, Dade and Monroe.

4th Division, with headquarters at Ocala, shall comprise the following counties: Gilchrist, Alachua, Putnam, Flagler, Levy, Marion, Citrus, Hernando, Sumter, Lake, Volusia, Seminole and Orange.

5th Division, with headquarters at Lakeland, shall comprise the following counties: Pasco, Pinellas,

Hillsborough, Polk, Osceola, Manatee, Hardee, Highlands, Sarasota, DeSoto and Charlotte.

BE IT FURTHER RESOLVED, That the re-arrangement hereinbefore outlined shall be and become effective May 15th, 1929.

BE IT FURTHER RESOLVED, That the Chairman be and he is hereby authorized to select from the present personnel the division engineers who shall be in charge of the several divisions as above listed.

Testing Division

On motion of Mr. Shands, seconded by Mr. Perkins, the following resolution was adopted:

BE IT RESOLVED by the Department that the Testing Division at Gainesville be and it is hereby authorized and directed to investigate Florida products available for road construction, with a view to their use in the construction of State roads.

State Road 78

The Chairman brought to the attention of the members a resolution of the City Commission of the City of St. Augustine, and a resolution of the Lions Club of said city, offering to release the Department from its offer to furnish \$125,000.00 for the construction of a bridge across San Sebastian river, provided the Department would add thereto the sum of \$75,000.00, the whole amount of \$200,000.00 thereby provided to be used in the construction of State Road 78. No formal action was taken on the resolutions, but it was the sense of the meeting that the Chairman will write to these organizations that the Department is not authorized to divert funds from a road on the preferential system for use on another road which is not included in the first or second preferential system.

Palm Beach County—Roads 117 and 110

The Chairman presented a letter from Senator Alfred H. Wagg, requesting that a survey of roads 117 and 110 between West Palm Beach and Indian Town be made by the Department's engineers.

On motion of Mr. Shands, seconded by Mr. Bayliss, the following resolution was adopted:

BE IT RESOLVED, That the engineers of the Department be directed to make a survey of the route of State Roads 117 and 110 between West Palm Beach and Indian Town.

Project 717—Road 28—Bradford County

On motion of Mr. Shands, seconded by Mr. Bayliss, the following resolution was unanimously adopted:

BE IT RESOLVED, That the Chairman be and he is hereby authorized to advertise for bids for the surfacing of that section of State Road 28 between Starke and the Clay County line.

Okaloosa County

A delegation consisting of Senator Purl G. Adams, Messrs. H. A. Burke, Claude Meigs, J. J. Ward and C. H. Overman requested the Department to give its approval to suggested legislation looking to the diverting of funds of approximately \$38,000 which the Department now holds, to place a sand-clay surface on Road 54 in Okaloosa County and to use the remainder of approximately \$12,000.00 in the betterment of the county road between Niceville and the Santa Rosa County line.

On motion of Mr. Shands, seconded by Mr. Bayliss, the following resolution was adopted:

BE IT RESOLVED, That it is the sense of this

Department that it has no objection to the legislation as suggested by the above delegation from Okaloosa County.

Rights of Way for State Roads

On motion of Mr. Shands, seconded by Mr. Bayliss, the following resolution was unanimously adopted:

BE IT RESOLVED, That from and after October 1st, 1929, it shall be the policy of this Department to ask and secure rights of way for State roads of a width of not less than 100 feet.

State Road 44—Volusia County

Mr. Fred R. Wilson of Sanford appeared before the Department to ascertain if the State is in a position to do anything with respect to the construction of State Road 44 in Volusia County. Mr. Wilson was advised that the State Road Department is not authorized to expend its funds on said road.

Location of State Road 27 Through Naples

On motion of Mr. Shands, seconded by Mr. Bayliss, the following resolution was adopted:

BE IT RESOLVED, That this Department does approve the change of location in State Road 27 through the City of Naples, along the following route, that is to say:

West of 5th Avenue South to a point, thence on a curve to the right, said curve having a radius of 100 feet into the center line of 9th Street running north.

Road 17—Plant City to Tampa

The Chairman presented a letter from the Mayor of Tampa requesting that concrete be used in the construction of Road 17 between Plant City and Tampa, and that the same be widened in the city limits of Tampa. No formal action was taken but it was stated the Chairman would write the Mayor further with reference to this matter.

Letter to Governor Carlton

The Chairman read for the information of the members a letter which he had transmitted to the Governor, showing that the Department had reduced its payroll \$13,047.92 for the month of February as against the January payroll, and that it is expected further reduction will be shown in the payroll for March and subsequent months.

Atlantic Coastal Highway Association

An invitation was received by the members of the Department to attend a meeting of the Atlantic Coastal Highway Association, which will be held at Key West on June 24th. The Chairman was requested to acknowledge receipt of the invitation and state that the members will attend if possible.

Road 76—Tallahassee to Quincy

Senator S. W. Anderson of Gadsden County, and Dr. C. M. Ausley, member of the Board of County Commissioners of Leon County, appeared before the Department and asked that the Department request the Bureau of Public Roads to include in the Federal Seven Percent System, Road 76 between Tallahassee and Quincy.

On motion of Mr. Shands, seconded by Mr. Bayliss, the following resolution was adopted:

BE IT RESOLVED, That the Chairman be requested to ascertain from the Bureau of Public Roads if it can include in the Federal Seven Percent System, State Road 76 between Tallahassee and Quincy, and if so what may be expected on said road in the way of Federal funds.

BE IT FURTHER RESOLVED, That the Chairman also ascertain from Leon and Gadsden counties what assistance may be expected from said counties if this road is also included in the Federal System.

BE IT FURTHER RESOLVED, That the Chairman be requested to report the information obtained at the next meeting of this Department.

Road 58—Glades County

Senator S. W. Anderson of Gadsden County requested the Department to state what it could do with reference to the construction of Road 58. Senator Anderson was advised that the Department is not now authorized to expend its funds on said road.

Expense Accounts Approved

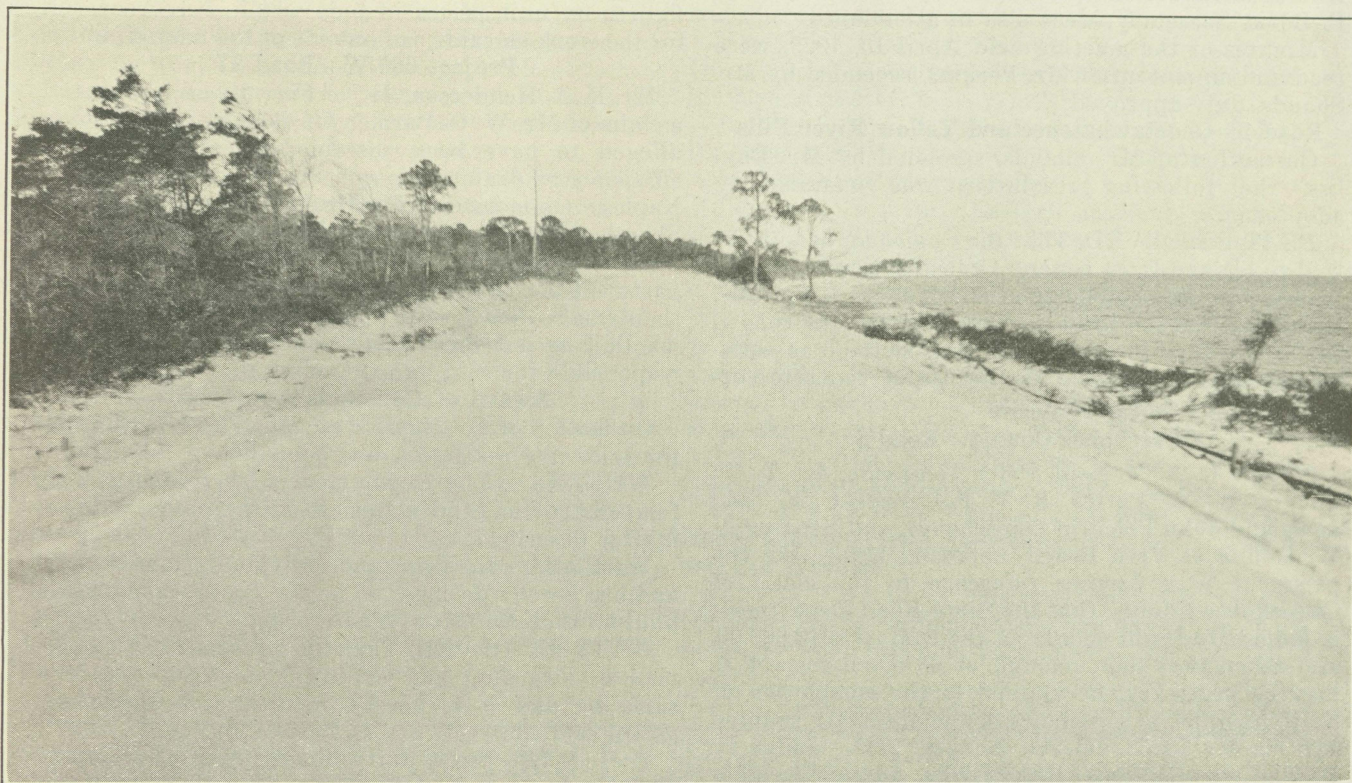
On motion of Mr. Bentley, seconded by Mr. Bayliss, the expense accounts of the members were approved and ordered paid, as follows:

W. A. Shands	\$ 56.55
G. D. Perkins	201.53
R. W. Bentley	32.78

Minutes Approved

On motion of Mr. Shands, seconded by Mr. Bayliss, the minutes of the meeting held March 5th and 6th, 1929, were duly approved.

On motion of Mr. Shands, seconded by Mr. Perkins, the Department was adjourned.



Project 685, Road 10, Franklin County

Famous Slogans Revised

"When better Chevrolets are built, Pontiac will build them."—General Motors.

"What a whale of a difference a few scents make."—Lifebuoy Soap.

"If garters were worn around the neck you'd have to have two necks."—Paris Garters.

"If you don't know she wears them, have your eyes examined."—McCallum hosiery.

"Even for lazy people."—Wrigley's gum.

"It slips."—Ivory soap.

"When it rains it's empty."—Morton's salt.

"It's roasted."—Lucky Strike advertising copy.

"Twenty Mule Team obstinacy."—Borax.

"Good to the last drop."—American Parachute Co.

"Ask the man who owns one—then run."—Packard auto.

"After every meal."—Bon Ami cleanser.

"Eventually, why not now?"—Mortuary Monumental Works—The Pathfinder.

So They Say

The following are some answers given by eighth grade children—so the story goes:

The equator is a menagerie lion (imaginary line) running around the earth.

A blizzard is the inside of a duck.

The wife of a vicar is a vixen.

Martin Luther did not die a natural death—he was excommunicated by the Pope's bull.

The epistles were the wives of the apostles.

You can look down a volcano and see the creator smoking.

M. D. means "mentally deficient."

A deacon is what you light on the top of a hill.

A thermometer is an instrument for measuring temperance.—The Pathfinder.

Wonders of Americanese

"Give a sentence with 'accommodating.'"

"How soon shall I be accommodating you again?" asked the eager swain.—Judge.

Transactions at A Special Meeting of the State Road Department Held May 9, 1929

PURSUANT to due and legal call, a special meeting of the State Road Department was held at Tallahassee, May 9, 1929, with the following members present: Robert W. Bentley, Chairman, W. A. Shands, J. Harvey Bayliss, G. D. Perkins and Ernest R. Graham, the latter having been appointed by the Governor, qualified, and confirmed by the Senate as member of the Department for the 4th Congressional District since the date of the last meeting. J. L. Cresap, State Highway Engineer, B. A. Meginniss, Attorney for the Department, and W. P. Bevis, Secretary, were also in attendance.

Minutes of the meeting held April 10, 1929, were read and on motion of Mr. Perkins, seconded by Mr. Shands, duly approved.

Road 1—Choctawhatchee and Yellow River Fills

On motion of Mr. Shands, seconded by Mr. Bayliss, the following resolution was unanimously adopted:

BE IT RESOLVED, That the Chairman be authorized to change from concrete construction to a rock base across Choctawhatchee and Yellow River fills, such road surface to be tied into concrete apron, in the event that he shall find this method as satisfactory and economical as the use of concrete surface, which was contemplated.

Okeechobee County—Road 8

Messrs. D. R. McNeill, Peter Tomasello, Jr., T. W. Conely, W. W. Potter, R. Y. Patterson, C. E. Simmons and John Price, of Okeechobee, and Senator A. W. Young of Vero Beach, appeared before the Department with further reference to the claim of Okeechobee County that the State Road Department is indebted to said county in the sum of \$210,000.00, and asked that that amount, or so much thereof as may be necessary, be applied to the completion of State Road 29, in pursuance of the authority granted by Chapter 10962, Special Acts of 1925. Judge H. B. Phillips of South Jacksonville, former member and chairman of the Department, was also present and participated in the discussion of the matter. After an exhaustive hearing, the following resolution, on motion of Mr. Shands, seconded by Mr. Perkins was duly adopted:

BE IT RESOLVED, That the Department do defer consideration of the claim of Okeechobee County for a refund of \$210,000.00 pending an investigation by Mr. Graham, new member of the Department, of all testimony and files and such additional evidence as may be submitted to him at Okeechobee.

BE IT FURTHER RESOLVED, That Mr. Graham be and he is hereby requested to make a report and his recommendations to the Department at its meeting to be held May 15th, at which time final action on the matter by the Department will be taken.

State Road 4—Boynton

Mr. J. Stockton Bryan of West Palm Beach, Attorney for the Town of Boynton, presented to the Department the claim of that municipality for reimbursement to the extent of the cost of 18 feet of pavement on Road 4 through said town. On motion of Mr. Shands, seconded by Mr. Perkins, the following resolution was adopted:

BE IT RESOLVED, That the engineers of the Department be and they are hereby directed to make an inspection of that part of State Road 4 through the Town of Boynton, with a view to ascertaining if said road has been constructed in accordance with standard state's specifications.

BE IT FURTHER RESOLVED, That the engineers be requested to furnish to this Department, at its meeting to be held May 15th, an estimate of the amount which would be required to construct its 18-foot pavement through said town, basing their figures on unit prices in bids which were received for the work on said road outside of the municipality.

Project 669-W—Road 27

Mr. R. A. Henderson, Jr., of Fort Myers, presented a claim of Mr. W. O. Parmer for damage to his grove, alleged to have been sustained by reason of inefficiency of drainage in construction of Road 27 at Naples. On motion of Mr. Graham, seconded by Mr. Shands, the following resolution was adopted:

BE IT RESOLVED, That an engineer of the Department be sent to Naples to ascertain the cause of the damage done to the grove of W. O. Parmer, and whether or not this Department is solely or partly responsible for said damage, if at all.

Award of Contracts Approved

On motion of Mr. Bayliss, seconded by Mr. Shands, the following resolution was adopted:

WHEREAS, The Department advertised for bids for construction and materials on the projects hereinafter described, and

WHEREAS, the firms and individuals named were and are hereby declared to be the lowest responsible bidders therefor, Now, Therefore,

BE IT RESOLVED, That the action of the Chairman in awarding and executing contracts for the same be and it is hereby ratified and approved, which said contracts are as follows, to-wit:

Project 743, Bay County, Road 10, approximately 20,000 tons of rock, delivered to Bay Harbor, Marianna Lime Products Co., \$41,000.00.

Project 815, Road 54, Okaloosa County, sand-clay, Penton-Mathis Construction Co., Florala, Ala., \$24,940.00.

Project 500-C, Road 20, Bay County, creosoted timber, Pensacola Cresoting Company, Pensacola, Fla., \$5,445.17.

On motion of Mr. Shands, seconded by Mr. Graham, the Department was adjourned.

GAS TAX NOW UNIVERSAL

Gasoline taxes will be in effect everywhere in the United States this summer. New York, the last State to pass a gas tax, has adopted a 2-cent levy which will go into effect May 1. Illinois recently adopted a 3-cent tax, to go into effect August 1.

Nebraska last week voted to increase the gas tax from 2 to 4 cents. Wyoming recently increased its tax from 3 to 4 cents. The average rate for the forty-eight States is now over 3.4 cents.

Quebec, British Columbia, Nova Scotia and Prince Edward Island have a 5-cent gas tax, and all the other Canadian provinces collect 3 cents.—Kentucky Highways.

Universal Safety Service

The complete list of subjects and dates, with the names of nine of the thirteen celebrities who will make up the "Universal Safety Series" of radio addresses to be given over a nation-wide air hookup, was announced recently by the National Broadcasting Company and the National Safety Council, sponsors of the programs.

Thirteen weekly safety talks will be given on successive Saturday evenings, beginning April 20. The addresses will be broadcast over a nation-wide hookup by national leaders representing varied lines of modern activity. Charles M. Schwab will be the first speaker, on "New Values in Industry."

The purpose of the series, according to Managing Director W. H. Cameron of the National Safety Council is to awaken a sense of individual responsibility by direct radio appeal to a probable audience of thirty million people. Twenty-seven stations of the National Broadcasting Company red network chain will participate in the programs.

"I am firmly convinced," says Mr. Cameron "that the series will result in a substantial reduction in our national accident figures during 1929. It is a tragic fact that there are nearly 100,000 accidental deaths in the United States each year. It is a tremendous waste that could be greatly reduced if the individual would only pause to reflect on his own responsibility in the problem."

The first address will be given next Saturday evening at 7:00 p. m. eastern standard time. The second talk will be given a week later at 7:15, eastern standard time. All other addresses are scheduled for succeeding Saturday evenings at 7:15 p. m., eastern daylight savings time.

The complete program as prepared to date, is as follows:

April 20, 7:00 p. m. (Eastern standard time)—Charles M. Schwab: "New Values in Industry." The series and Mr. Schwab will be formally intro-

duced by President Henry A. Reninger of the National Safety Council.

April 27, 7:15 p. m. (Eastern Standard time)—Albert W. Whitney, Associate General Manager, National Bureau of Casualty & Surety Underwriters: "Death Through Accidents."

May 4, 7:15 p. m. (Eastern daylight savings)—P. E. Crowley, President New York Central Lines: "The Railroads and Safety."

May 11, 7:15 p. m. (Eastern daylight savings)—Hon. Robert P. Lamont, Secretary of Commerce: "Safety as a National Problem."

May 18, 7:15 p. m. (Eastern daylight savings)—Madam Ernestine Schumann-Heink, famous concert and operatic star: "Safety in the Home."

May 25, 7:15 p. m. (Eastern daylight savings), (Speaker to be announced)—"Education—The Part it Plays in Safety."

June 1, 7:15 p. m. (Eastern daylight savings)—Dr. Miller McClintock, Director Erskine Bureau: "Making Our Highways Safe."

June 8, 7:15 p. m. (Eastern daylight savings)—Grover A. Whalen, New York Commissioner of Police: "Enforcement as an Aid to Safety."

June 15, 7:15 p. m. (Eastern daylight savings), (Speaker to be announced)—"The Automobile and Safety."

June 22, 7:15 p. m. (Eastern daylight savings)—Joseph E. Sheedy, Executive Vice-President U. S. Steamship Lines: "Safety on the High Seas."

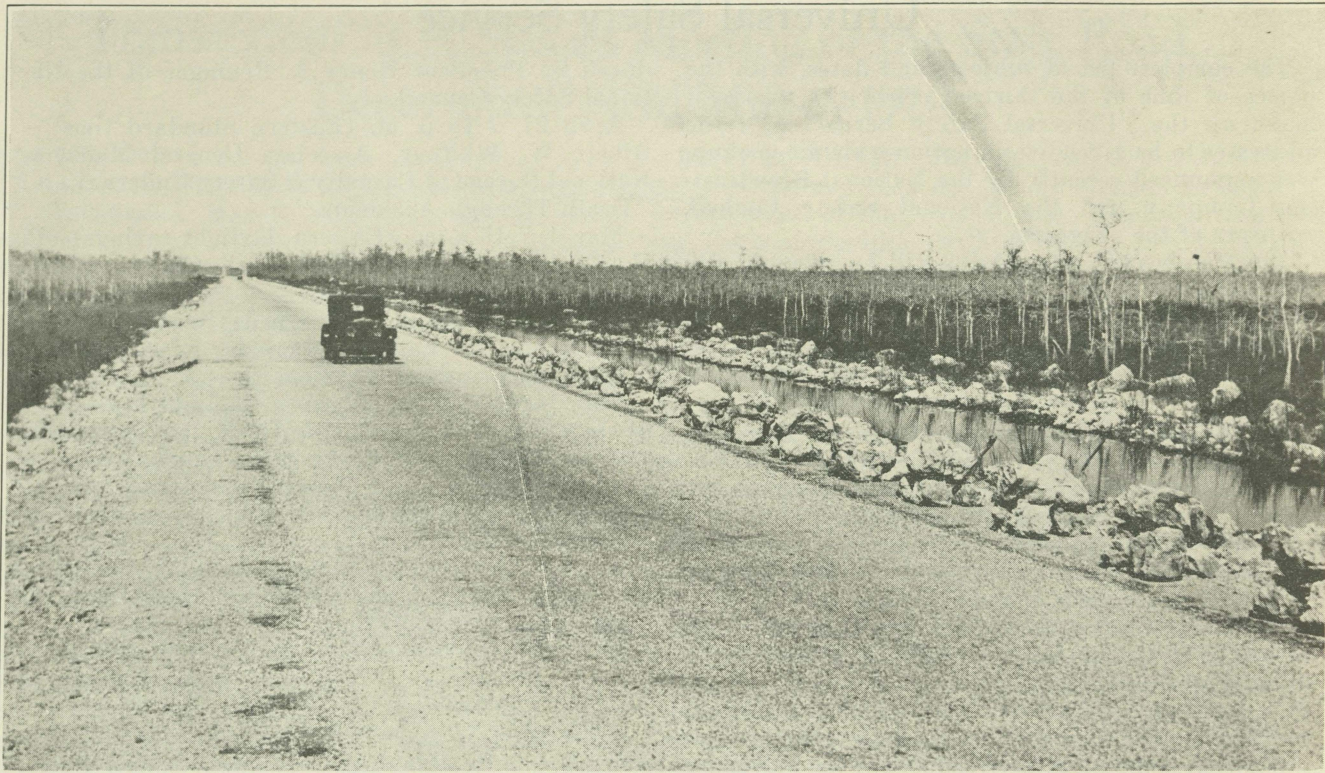
June 29, 7:15 p. m. (Eastern daylight savings), (Speaker to be announced)—"Safety in the Air."

July 6, 7:15 p. m. (Eastern daylight savings)—Hon. James J. Davis, Secretary of Labor: "Safety and the Worker."

July 13, 7:15 p. m. (Eastern daylight savings), (Speaker to be announced)—"Summing up." A summary of previous arguments for a Safer America.

Contracts Awarded by State Road Department January 1st, 1929, to May 16th, 1929

Proj.	Road	County	Contractor	Length Miles	Length Feet	Contract + 10%	Type
55	14	Alachua	L. M. Gray	16.77		206,412.32	R. B. S. T.
624	50	Hamilton	Manly Const. Co.	6.23		84,888.18	R. B. S. T.
858	4	Duval	F. S. Whitney	7.00		68,438.10	Mac. Asph.
678	10	Bay	McVay Lindsay & Son	5.00		9,295.00	Hauling
695	2	Lake	Manly Const. Co.	0.40		5,380.54	R. B. S. T.
6	1	Madison	Duval Engr. & Contr. Co.	5.45		91,560.17	R. B. S. T.
669-Y	27	Collier	Kerr and Lawrence	13.55		99,705.56	Grading
854	60	Walton	G. W. Byrd	9.81		85,160.28	Sand Clay
855	60	Walton	C. C. Moore Const. Co.	9.32		90,311.26	Sand Clay
661	2	Lake	Manly Const. Co.	.14		9,313.15	Sheet Asp.
767-688	10	Bay	H. W. Johnson		75	2,567.88	Timber
40-B	4	Brevard	I. B. Purdy			10,565.72	Embankment
806-A	25	Hendry	R. C. Huffman Const. Co.	11.00		32,594.05	C. G. & G.
806-C	25	Hendry	R. B. Stuart	11.00		44,761.37	C. G. & G.
806-D	25	Hendry	R. C. Huffman Const. Co.	12.76		62,950.91	C. G. & G.
62-B	24	Osceola	Florida Bridge & Const. Co.		789	115,447.66	Conc. Bdg.
518	5-A	Lafayette	Broadbent Const. Co.	17.57		244,783.73	R. B. S. T.
587-B	5-A	Columbia	Perkins & Lawson		99	11,405.71	Conc. Bdg.
678	10	Bay	McVay Lindsay & Son	4.00		13,860.00	Hauling
715	28	Union	L. M. Gray	5.26		70,922.96	R. B. S. T.
716	28	Bradford	Duval Engr. & Contr. Co.	11.22		157,799.23	R. B. S. T.
587	5-A	Columbia	Duval Engr. & Contr. Co.	4.43		53,885.30	R. B. S. T.
718	5-A	Columbia	Duval Engr. & Contr. Co.	8.22		101,724.95	R. B. S. T.
815	54	Okaloosa	G. W. Byrd	12.50		27,434.00	Sand Clay
717-706-A	28	Bradford-Clay	Manly Const. Co.	12.06		173,340.83	R. B. S. T.
749-750	14	Gilchrist	L. B. McLeod Const. Co.	8.52		100,722.27	R. B. S. T.
820	96	Jefferson	H. D. Spangler & Co.	9.38		63,008.18	G. & D.
821	96	Jefferson	H. D. Spangler & Co.	5.13		25,478.80	G. & D.
615	5	Sarasota	L. B. McLeod Const. Co.	1.20		20,359.90	R. B. S. T.
	25	Palm Beach	Southern Asph. Const. Co.	4.00		5,575.87	S. T.
Total				211.92	963	\$2,089,653.88	



Tamiami Trail, Road 27, Collier County

Detours are Sign of Road Progress

MAY BE A BIT TRYING BUT HAVE THEIR PLACE; 12,000 MILES OF THEM THIS YEAR

By E. E. DUFFY

DETOURS, like mothers-in-law, are grossly maligned. The detour, though all too frequently bumpy and dusty, is a sure sign that an effort is being made to provide smooth and economical travel conditions for the motorist.

Considering the attitude the average motorist possesses toward the detour, probably no set of figures would be more depressing to him than those showing detour mileage. Be that as it may, in 1928, motorists are being compelled to travel 4,000 miles over improvised roads because of high type pavement construction, and 8,000 miles because of other road construction and bridge installations.

A few years ago a facetious gentleman remarked that there was more "de-touring" than touring. At that time he was undoubtedly right—for then detours were established helter-skelter and the dilly-dallying of highway builders prolonged the agony.

But today, the detour is usually a fairly well kept roadway and travel is directed over it for as short a time as possible. Road builders now accomplish as much in a week as they did in a month ten years ago, and this means that paved highways are being thrown open to traffic much earlier.

Road builders have adopted a striking method of road construction for which the motoring public may be thankful. This is half at a time construction wherein one-half of a pavement is laid while traffic continues traveling over the other portion. When the first strip of pavement is laid traffic is moved over to the pavement and the gigantic paving mixer then travels down the other lane leaving a trail of con-

crete flush with the strip in use. This is of course not always practicable.

A community without detours is either a community with enough good roads, a rara avis, or else that community is neglecting its roads.

Even at that, the detour is certainly no worse than the roadways over which travel in buck-boards was current a few years ago. If the detour is a bit rough, the only thing to do is to be Pollyanish about it.—Badger Highways.

Ma: "Where's the cow, Johnnie?"

Johnnie: "I can't get her home; she's down by the railroad track flirting with the tobacco sign."

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H. N. HUTCHINSON, Manager.

Many Modern Highways Follow Ancient Roads

MANY motorists who speed along the Old Post road out of Boston today are unaware that Paul Revere galloped along that same route after hanging his famous lantern in Old North Church.

Nor do travelers on the Corniche road in the French Riviera always realize they are skimming over a sector of the Via Aurelia, a Roman "speedway" which Emperor Aurelius began more than two centuries before Christ was born.

"Speedway" is entirely correct as an appellation for those Roman roads, a National Geographic society bulletin points out. We have the word of Pliny, an early geographer, for it. Once a Roman emperor traveled 200 miles in 24 hours, in three relays of chariots. He sped at eight miles an hour. Pliny describes that record as "a wonderful thing and an instance of incredible celerity."

"Many present-day roads are telltales of ancient history for they follow the routes of historic highways," continues the bulletin. "This is especially true of highways of modern Europe and even of the United States. Watling Street and Stane Street and Peddars Way are survivors of the military roads with which Rome once adorned Britain.

"Nobody knows who built the first road but remains have been found of a highway laid out by Cheops, builder of the great pyramid, in Egypt. Babylon had three great highways and the first levying of tolls in the history of highways took place on one of these Babylonian routes. The Carthaginians were the most scientific road builders of ancient times, but the details of their construction have been lost.

"'All roads lead to Rome,' was not a metaphor, but a fact during the supremacy of the Roman empire. Roads led to the imperial city from Dacia, present day Transylvania, on the east, and Germany on the west. Another road branched from the very tip of what now is Spain. By the Roman laws the roads were free for the use of the public. They could belong to no one person or group of persons and the emperors were charged with their maintenance. Soldiers, convicts and slaves kept them in repair. In some places service on the roads eliminated the payment of taxes. The Romans were proud of the emperors who built highways. They honored them with triumphal arches and medals and named the highways after them, such as the Via Appia and the Via Aurelia.

"The Via Appia was the Roman 'Lincoln Highway.' Over it St. Paul the apostle traveled, untroubled by toll collectors. It was begun by Caesar Appius Claudius in 312 B. C., and when completed reached to Brindisi on the Adriatic coast. Modern traffic takes a new path, but the Via Appia still runs its course from Rome across the Alban hills.

"The Romans had no road maps. They published itineraries listing the stations along the road with the distances between each station. Their nearest approaches to road maps were drawings of the stations with topographic features of the surrounding country.

"When the Roman empire declined, road building did likewise. Charlemagne, emperor of the Franks, began a program of road construction, but after his death the development passed into a lethargy which was hardly disturbed during the middle ages.

"A quaint law was passed in England in the middle ages relative to the muddy and rutted highways of the day. According to the law bushes and trees were felled for 200 feet on either side of a road to prevent the gentle inhabitants of the countryside from rushing out and attacking travelers! The first toll for the maintenance of English roads was passed by Edward III in the fourteenth century.

"The Incas of Peru had the most extensive highway system in the New World. Their 'Queen of Roads,' which connected Quito and Cuzco, was five-times as long as the completed Via Appia. They were shrewder engineers than the Romans. The latter built their roads in straight lines, conquering all difficulties in their paths. The Incas curved and graded their highways to avoid ascents and forests.

"The father of modern road building is Napoleon. He systematized the industry and appointed a body of engineers to supervise the construction of French roads. Other European countries and the United States were quick to perceive the value of improved highways.

"Turkey, long closed to western ways, is planning an asphalt-surfaced highway from Constantinople to Angora. Every day new announcements bring in tidings of new roads being built in lesser known parts of the world. Automobiles demand an ever widening touring radius, and modern travelers no longer fear the mythological creatures which medieval people believed inhabited the unknown parts of the earth."—Michigan Roads and Pavements.

SPEED VS. SAFETY

Proofs to show us positively that speed is often a saver of so little time as to be absolutely unnecessary, is offered by the American Road Builders' Eq. Association. This association cites a test made by a Chicago taxicab company to show the futility of unreasonable speed as a means of gaining time.

"Two cabs were started simultaneously, destined for a point nine miles distant, over a main thoroughfare of that city. One traveled at top speed and the other at a reasonable speed. The speeding cab arrived at its destination only four minutes prior to

the arrival of the safety cab. Dozens of hazards were created by the faster cab, lives were endangered, property imperiled, and laws violated—all for four minutes time."—!!

Only one thing further need be said: If you value a saving of one-half a minute per mile more than you value the 30, 40, or 50 years you expect to live, then by all means, speed! Automobile hearses are much faster than the old horse-drawn ones.—Badger Highways.

If one could add to his life at fifty the time he wasted before fifty, centenarians would be as common as Fords.

Status of Construction

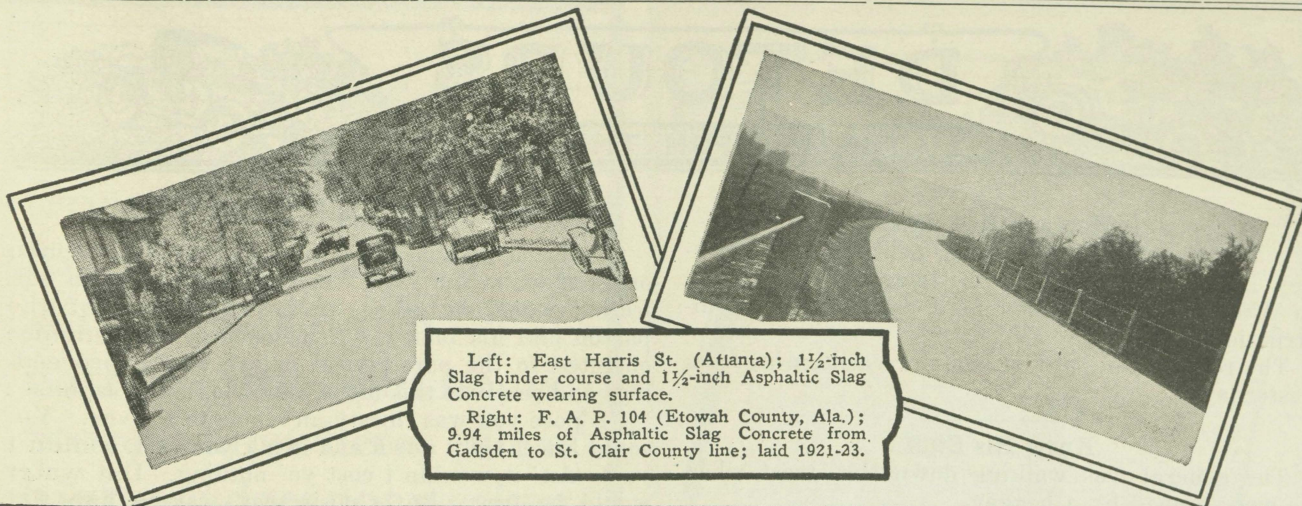
THROUGH FEBRUARY 28th, 1929

Proj. No.	Contractor	Road No.	County	Total Length Miles	Clearing Miles	Grading Miles	Base Miles	Surface Miles	Per Cent Complete
6-A	Duval Engr. & Contr. Co.	1	Madison	5.56			0.00	0.00 S.T.R.B.	0.00
52	R. G. Lassiter & Co.	1	Escambia	10.00			0.00	0.00 Concrete	0.00
53-C	Manly Const. Co.	2	Lake	1.87			1.87	1.87 Bit. Conc.	97.00
55	L. M. Gray	14	Alachua	16.44			13.15	0.00 S.T.R.B.	61.00
56	Nelson Bros.	10	Leon	17.98				11.51 Concrete	62.00
62-A	A. D. Weeks	24	Osceola	12.52	11.89	11.89		Graded	98.00
62-C	Everglades Const. Co.	24	Osceola	11.83	11.83	11.47		Graded	95.00
62-D	A. D. Weeks	24	Osceola	12.62	12.62	12.11		Graded	95.00
624	Manly Const. Co.	50	Hamilton	6.48			1.37	0.00 S.T.R.B.	18.00
672	J. B. McCrary Engr. Corp.	1	Leon	9.92				2.47 Concrete	23.00
673	R. G. Lassiter & Co.	1	Gadsden	14.97				3.75 Concrete	24.90
678	McVay Lindsay & Son	10	Bay	5.65			0.00	0.00 S.T.R.B.	0.00
685	Pararo Const. Co.	10	Franklin	18.46			12.00	1.48 S.T.R.B.	60.00
687-B	Wm. P. McDonald Const. Co.	2	Lake	14.02			14.02	1.40 S.T.R.B.	80.00
688	State Convict Forces	10	Bay	9.32	9.32	8.85		Graded	93.00
707	Leon County Forces	43	Leon	5.31	4.83	1.59		Graded	34.00
719	Broadbent Const. Co.	5-A	Suwannee	8.57			8.57	1.00 S.T.R.B.	72.00
722	R. J. Carroll	48	Jefferson	8.83	8.83	7.00		Graded	86.00
723	State Convict Forces	66	Leon	11.76				9.00 Sand Clay	76.57
724	Leon County	66	Leon	10.67	10.67	9.99		0.00 Sand Clay	85.00
726	State Convict Forces	19	Dixie	12.62	12.62	11.36		Graded	87.00
728	State Convict Forces	10	Leon	11.65	11.65	11.18		Graded	97.00
732	Gilbert & Hadcock	17	Polk	8.94	8.94	7.60		Graded	85.00
733	W. J. Bryson Paving Co.	33	Walton	4.23	4.23	2.54		0.00 Sand Clay	45.40
734	Penton-Mathis Const. Co.	40	Walton	7.89	7.11	3.71		0.00 Sand Clay	45.06
735	W. J. Bryson Paving Co.	40	Walton	13.71	13.71	5.49		0.00 Sand Clay	40.46
740	Baker & Lewis	10	Gulf	9.63			9.63	4.82 S.T.R.B.	85.00
743	Baker & Lewis	10	Bay	18.25			9.12	6.75 S.T.R.B.	47.15
744	State Convict Forces	19	Madison	5.79	5.79	5.79		Graded	99.00
745	State Convict Forces	19	Taylor	15.95	15.95	15.79		Graded	98.30
749	State Convict Forces	14	Gilchrist	7.81	7.42	7.03		Graded	87.00
750	State Convict Forces	14	Gilchrist	12.97	7.65	7.00		Graded	57.00
751	W. J. Bryson Paving Co.	40	Walton	7.28	6.71	2.55		0.00 Sand Clay	29.02
752	W. J. Bryson Paving Co.	40	Walton	8.72	8.02	2.88		0.00 Sand Clay	29.95
755	B. Booth	17	Polk	11.22	11.22	9.54		Graded	85.00
763	Duval Engr. & Contr. Co.	50	Suwannee	12.23			4.32	0.00 S.T.R.B.	37.00
764	Duval Engr. & Contr. Co.	50	Suwannee	12.00			12.00	4.00 S.T.R.B.	85.00
765	Duval Engr. & Contr. Co.	50	Suwannee	7.00			4.89	0.00 S.T.R.B.	67.28
766	State Convict Forces	10	Bay	8.74	2.88	.17		Graded	5.00
767	State Convict Forces	10	Bay	5.27	4.76	3.90		Graded	60.00
780	F. W. Long & Co.	29	Okeechobee	11.00			3.63	0.00 S.T.R.B.	25.00
781	F. W. Long & Co.	29	Okeechobee	11.00			0.00	0.00 S.T.R.B.	0.00
782	C. F. Walker	29	Okeechobee	6.62	6.62	6.62		Graded	95.00
787	State Convict Forces	10	Walton	16.27	3.25	1.63		Graded	8.00
788	W. J. Bryson Paving Co.	10	Walton	17.54	1.92	.87		Graded	3.80
798	State Convict Forces	13	Nassau	15.03	6.50	2.45		Graded	22.00
802-A	C. C. Hayes	10	Okaloosa	8.68	7.90	3.30		Graded	47.50
802-C	Curry & Turner	10	Okaloosa	10.24	6.55	3.58		Graded	31.00
803	Collins Const. Co.	10	Okaloosa	11.13	6.12	2.45		Graded	23.46
804	C. A. Steed & Sons, Inc.	67	Glades	18.56	18.56	18.56	18.56	16.00 S.T.R.B.	98.00
807-A	R. C. Huffman Const. Co.	25	Palm Beach	10.82	10.82	10.82	10.28	0.00 S.T.R.B.	78.00
807-C	R. C. Huffman Const. Co.	25	Palm Beach	6.14	6.13	4.35	2.50	0.00 S.T.R.B.	64.00
815	Silas Gibson	54	Okaloosa	13.58	13.58	13.44		Graded	99.00
824	W. J. Bryson Paving Co.	41	Okaloosa	9.82	9.82	9.50		Graded	98.00
827	S. G. Collins		Escambia	8.12	8.12	8.12		Graded	100.00
840	State Convict Forces	115	Walton	10.45	2.04	1.12		Graded	10.00
842	W. J. Bryson Paving Co.	115	Walton	10.00	0.00	0.00		Graded	0.00
844-A	State Convict Forces	115	Okaloosa	7.10	6.74	2.48		Graded	39.10
844-C	State Convict Forces	115	Escambia	5.63	5.63	1.69		Graded	34.00
845	State Convict Forces	19	Taylor	8.57	0.00	0.00		Graded	0.00
Total complete February 28, 1929				2789.44	2718.03	1364.32	1950.38		
Complete month of February				18.82	21.68	24.51	39.98		
Total complete January 31, 1929				2770.62	2696.35	1339.81	1910.40		

TOTAL MILEAGE COMPLETE

	Concrete	Brick	B. C.	S. A.	B. M.	Asph. Block	S.T.R.B.	S.T.S.C.	S. C.	Marl	Total
Complete to Jan. 31, 1929	269.63	17.13	38.80	114.61	109.57	23.20	1063.26	224.06	123.24	27.58	2011.08
Complete month of January	7.96		.89				22.88	2.33	6.35		40.41
Complete Feb. 28, 1929	277.59	17.13	39.69	114.61	109.57	23.20	1086.14	226.39	129.59	27.58	2051.49

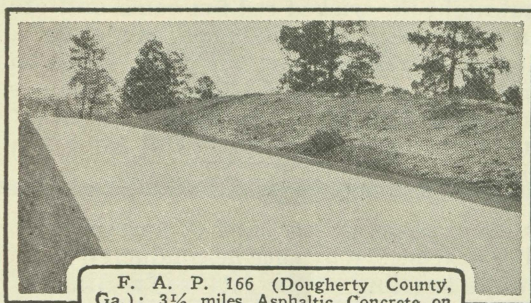
NOTE: Tables revised and corrected as of January 1st, 1929.



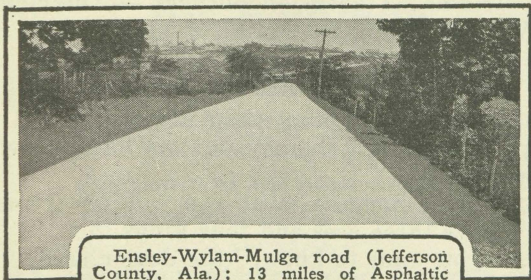
Left: East Harris St. (Atlanta); 1½-inch Slag binder course and 1½-inch Asphaltic Slag Concrete wearing surface.

Right: F. A. P. 104 (Etowah County, Ala.); 9.94 miles of Asphaltic Slag Concrete from Gadsden to St. Clair County line; laid 1921-23.

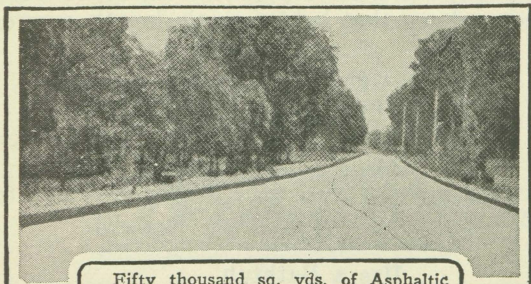
235 miles ASPHALTIC CONCRETE!



F. A. P. 166 (Dougherty County, Ga.); 3½ miles Asphaltic Concrete on the Dixie Highway from Albany to Sylvester, Ga.; laid 1921 by Ely Construction Co., of Augusta.



Ensley-Wylam-Mulga road (Jefferson County, Ala.); 13 miles of Asphaltic Slag Concrete on Slag Macadam base; laid 1922 by Independent Paving Co. (Birmingham).



Fifty thousand sq. yds. of Asphaltic Slag Concrete streets; laid 1921 in Greenwood, Miss., by Hornaday Construction Co., Memphis.



Crushed and screened Blast Furnace Slag, so contractors have found, is the ideal "mineral aggregate" for Asphaltic Concrete on account of the fact that slag is angular, tough and porous . . . and has a greater surface area for adhesion than other standard aggregates.

Prior to July 1st, 1928, a total of 2,484,699 sq. yds. (more than 235 miles) of Asphaltic Concrete had been laid throughout the Southeast in which

"ENSLEY" & "ALA CITY"
BASIC SLAG
CRUSHED & SCREENED

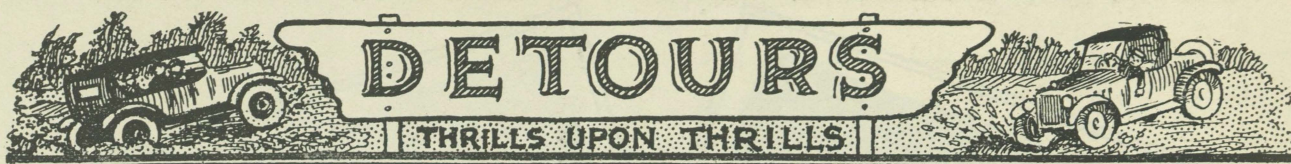
was used in the wearing surface. Much of this paving owes its present splendid condition, after five to eight years of heavy traffic service, to the fact that it was laid on slag concrete or slag macadam base.

Some of the longest and most important Asphaltic Concrete pavements in the Southeast are shown on this page. Most contractors are familiar with the **slag factor** in the service record of these big projects.

BIRMINGHAM SLAG CO.

Slag Headquarters for the South

ATLANTA BIRMINGHAM JACKSONVILLE
THOMASVILLE MONTGOMERY OCALA, FLA.



Here's a New One

A Scotch traveling salesman, held up in the Orkney Islands by a bad storm, telegraphed his firm in Aberdeen: "Marooned here by storm, wire instructions."

The reply came: "Start summer vacation as from yesterday."

Knew His Stuff

The general was walking down the street when he was stopped by a beggar.

"Don't refuse a trifle," said the latter; "I'm an old soldier."

"An old soldier, eh?" replied the general. "Then I'll give you a test. 'Shun. Eyes right. Eyes front. Stand at ease. Now what comes next?"

"Present alms," retorted the beggar.

They were on their honeymoon and the groom gave the porter a dollar not to tell anyone they were bride and groom. At breakfast the next morning everyone stared. The groom called the porter and asked, "Did you tell anyone on the train that we were just married?"

"No, sah," replied the porter, "I told 'em you-all was single."

Knew His Policemen

A motorist was held up by a traffic policeman.

"What's your name?" demanded the cop.

"Abraham O'Brien Goldberg," replied the motorist.

"What's the O'Brien for?" asked the officer.

"For protection," returned Abraham.

Professor (in an engineering class): "What is a dry dock?"

Student: "A physician who won't give out any prescriptions."

"Say, Joe, why do they always put straw on fresh concrete?"

"That's to keep the concrete from blowing away."

"Mama," said little Elsie, "I never see any pictures of angels with whiskers. Do men go to Heaven?"

"Well," said the mother thoughtfully, "some men do go to Heaven, but they get there by a close shave."

Legitimate Prognostication

"So your father knows the exact moment he will die, does he; the exact year, month and day?"

"Yessuh, he had ought to. The jedge tole him."

Teacher: "Use 'despair' in a sentence."

Grade Five: "If a tire blows out, put on de spare."

"John, did you ever see one of those machines that tells when a man is lying?"

"Did I? Lord, I married one of them!"

Sound Logic

A colored preacher had just concluded a sermon on "Salvation Am Free," and announced that a collection would be taken up for the benefit of the parson and his family. A member in the audience objected to the paradoxical nature of the proceedings and received this bit of negro logic in response:

"S'pose you was thirsty an' come to a river. Yo' could kneel right down and drink your fill, couldn't yo'? An' it wouldn't cost yo' nothing. Dat water would be free. But s'posin' yo' was to hab dat water piped to yo' house, yo'd have to pay, wouldn't yo'? De salvation am free, but it's de habin' it piped to yo' dat yo' got to pay for."

Oh, No! Not Really!

The teacher was telling a story to the kindergarten and interest was intense.

"So that night the wicked red fox came and stole a chicken. The next night he came and stole another chicken. And the next night he came and stole another chicken. And"—dramatic pause—"what do you suppose happened the next night?"

"Oh, teacher!" panted Peter. "Did he git another chicken?"

"Your uncle seems rather hard of hearing."

"Hard of hearing! Why once he conducted family prayers while kneeling on the cat!"—Tit-Bits.

New Popular Song

Voice over the phone: "How much is coal now?" Dealer: "Eighteen-ninety a ton."

Voice: "Ha-ha! I gotta oil burner."—American Legion Weekly.

What He Bid On

A certain convivial young chap dealt and bid a no trump; all passed. Dummy put his hand down and remarked:

"Well, I can't imagine what you bid no trump on when I have three aces and four kings."

"Well, if you want to know," the dealer said, "I bid it on one jack with two queens and three cock-tails."

"Hey, Mike," said a workman to the other atop, "don't come down that ladder on the north corner. I took it away."

Protective Barrage

Harry Wilcox of this city left today for a short business trip to Chicago. The Baptist Church of which he is a member will hold prayer services tonight.—Minneapolis Star.

Use a Bathtub

Never break your bread or roll in your soup.—Etiquette hint in an English paper.

Who remembers when neck was a noun?

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Carey Elastite
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And so on down the line—so that—today, Eppinger & Russell Co. with a wealth of experience and two modern plants offers you a service you cannot afford to overlook. Investigate.

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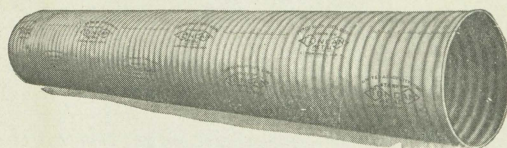
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